

2020-09-10

# Climate Change in the Canadian Impact Assessment Process

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Ajayi, A. O. (2020). Climate Change in the Canadian Impact Assessment Process (Master's thesis, University of Calgary, Calgary, Canada). Retrieved from <https://prism.ucalgary.ca>.  
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UNIVERSITY OF CALGARY

Climate Change in the Canadian Impact Assessment Process

by

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A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES  
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE  
DEGREE OF MASTER OF LAWS

GRADUATE PROGRAM IN LAW

CALGARY, ALBERTA

SEPTEMBER, 2020

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## **Abstract**

This thesis examines how climate change, particularly upstream and downstream greenhouse gas emissions (GHGs), have been considered in Canadian environmental impact assessment (EIA) of energy projects. The legal and policy framework on EIA for energy projects has evolved, and the recent transition from the Canadian Environmental Assessment Act 2012 (CEAA 2012) regime to the Impact Assessment Act (IAA) is the most recent change. Although the CEAA 2012 and the IAA share similarities, they have different requirements with respect to GHG emissions. One of the major differences is that the IAA makes climate change considerations an essential factor for the assessment and decision-making phases of the review and approval of a proposed energy project. Under CEAA 2012, climate change considerations were not clearly spelt out, though there were several avenues for GHGs to be considered in the assessment process. This thesis reviews the former regime and practice under CEAA 2012, then examines the new regime, and the GHGs consideration in the EIA process in the United States of America (U.S).

## **Acknowledgements**

I could not have completed this thesis without the support of many people. I thank my supervisors, Professor Fenner Stewart and Professor David Wright, for their time, patience, mentorship and guidance. Above all, I thank them for sharing their extensive knowledge with me as it was the light and guide to completing the thesis and birthing a substantial understanding of the topic. I thank Professor James Coleman for his time and advice for my fifth chapter; his advice was important in understanding the environmental assessment system in the United States of America.

I am very thankful to Professor Allan Ingelson for his advice and support and for granting me career developing opportunities. I would also like to thank Professor Evaristus Oshionebo for his advice and guidance throughout my program, and his advice to pursue a topic that is novel and filled with substance. I thank Professor Ryan Clements for his time and efforts as a fantastic Chair during my defence.

I am also grateful for the scholarship from the Faculty of Graduate Studies and the Faculty of Law.

I thank all my other Professors that shared their time and knowledge in the form of advice, teaching and guidance in completing the master's program. In particular, I thank Professor Lindsay Campbell for her exceptional guidance and advice in improving my research and writing. I thank Professor Greg Hagen and Professor Sharon Masher for their advice and encouragement. I thank Professor Nigel Bankes for enlightening me on environmental assessments and greenhouse gases.

I am profoundly grateful to my family for their support. I thank my Father, Mr. Hakeem Ajayi, my Mother, Mrs. Stella Adejugbe and Pastor Richard Ebofin, for their unwavering support.

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## **List of Abbreviations and Acronyms**

Best Available Technologies (BAT)

Best Environmental Practices (BEP)

Bureau of Ocean and Energy Management (BOEM)

Bureau of Land Management (BLM)

Canadian Energy Regulator Act (CERA)

Canadian Environmental Assessment Act 2012 (CEAA 2012).

Canadian Nuclear Safety Commission (CNSC)

Carbon Dioxide (CO<sub>2</sub>)

Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention)

Council on Environmental Quality (CEQ)

Department of Energy (DOE)

Department of Interior (DOI)

EARP Guidelines Order (EARPGO)

Environmental Assessment (EA)

Environmental Assessment and Review Process (EARP)

Environment and Climate Change Canada (ECCC)

Environmental Impact Assessment (EIA)

Environmental Impact Statements (EIS)

Federal Energy Regulatory Commission (FERC)

Finding of No Significant Impact (FONSI)

Greenhouse gases (GHGs)

Impact Assessment (IA)

Impact Assessment Act (IAA)

Impact Assessment Agency of Canada (IAAC)

Liquefied Natural Gas (LNG)

Megatonnes (Mt)

National Energy Board (NEB)

National Energy Board Act (NEBA)

National Environmental Policy Act (NEPA)

Nationally Determined Contributions (NDCs)

Nitrogen Oxides (NO<sub>x</sub>)

Office of Surface Mining Reclamation and Enforcement (OSMRE)

Oil Sands Environmental Coalition (OSEC)

Quality Urban Energy Systems of Tomorrow (QUEST)

Strategic Assessment of Climate Change (SACC)

Sulphur Dioxide (SO<sub>2</sub>)

Supreme Court of Canada (SCC)

The United Nations Convention on the Law of the Sea (UNCLOS)

The United Nations Framework Convention on Climate Change (UNFCCC)

U.S. Forest Service (USFS)

United Nations Framework Convention on Climate Change (UNFCCC)

United States of America (U.S.)

## Chapter 1: Introduction and Methodology

### 1.1 Introduction

This thesis reviews and evaluates how the emissions of greenhouse gases (GHGs) have been considered in the environmental assessment (EA) process of energy projects in Canada. The Canadian EA regime has been transformed over the years, depending on the environmental and energy policy of different governments.<sup>1</sup> The current Canadian legal regime for EA is the *Impact Assessment Act* (IAA).<sup>2</sup> However, the IAA replaced the EA process with an impact assessment (IA) process. The difference being that IA is more broad in scope than the previous legal regime under the *Canadian Environmental Assessment Act 2012* (CEAA 2012).<sup>3</sup> One of the significant differences is that the IAA explicitly incorporates climate change considerations as part of the IA process.<sup>4</sup>

This development raises several questions, one of which is how GHGs have been considered in previous EA regimes in Canada? Also, what are the new qualifications and limitations under the IAA provisions, and how have they reformed the process? These questions will be addressed in chapters two to four. After establishing the extent to which the Canadian federal law considers, and considered, GHGs in the assessment of energy projects, chapter five examines how GHGs are assessed under the *National Environmental Policy Act* (NEPA) in the United States of America (U.S.) context as an example for the implementation of the new IAA requirements.

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<sup>1</sup> Brenda Heelan Powell, "Environmental Assessment & the Canadian Constitution: Substitution and Equivalency" (2014) at 9, online (pdf): *Environmental Law Centre Albert Law Foundation* <<http://elc.ab.ca/media/94543/EACConstitutionBriefFinal.pdf>>; Robert B. Gibson, "From Wreck Cove to Voisey's Bay: the evolution of federal environmental assessment in Canada," *Impact Assessment and Project Appraisal* 20:3 (2002), pp.151-159.

<sup>2</sup> *Impact Assessment Act*, SC 2019, c. 28, s 1.

<sup>3</sup> *Canadian Environmental Assessment Act*, SC 2012.

<sup>4</sup> Anika Mendell, "Four Types of Impact Assessment Used in Canada" (2010) at 3, online (pdf): *NCCHPP* <<https://www.ncchpp.ca/docs/EvaluationImpactComparisonEN.pdf>>.

The IAA climate requirements sit in a broader context of Canada's climate reduction commitments under the *Paris Agreement*<sup>5</sup> to achieve net zero emissions by 2050.<sup>6</sup> The stakes are high because of global warming. Environmental impact assessment (EIA) may contribute to reducing emissions, and this thesis explores how the IAA provisions can improve emissions reduction efforts in Canada.

Chapter one provides the research question for the thesis, which will be answered over the course of the chapters. Also, the chapter provides the research methodology and the structure of the thesis.

## 1.2 Research Questions

The research questions addressed in this thesis are:

1. How have GHG emissions been considered under the current/previous assessment process for federally regulated energy projects?
  - i. To what extent did CEAA, 2012 provide statutory bases for considering GHG emissions in the federal energy projects approval process?
  - ii. Under the previous legal and regulatory framework in Canada, how have GHGs been considered in the EA assessment of federally regulated energy projects?
2. How does the IAA change the way GHGs are considered in the federal energy projects approval process?
  - i. What are the most significant changes presented by the IAA?

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<sup>5</sup> "Paris Agreement", 12 December 2015, FCCC/CP/2015/L.9/Rev.1 (entered into force 29 January 2016) (hereafter 'Paris Agreement').

<sup>6</sup> Environment and Climate Change Canada, "Government of Canada releases emissions projections, showing progress towards climate target" (20 December 2019), online: *Government of Canada* <<https://www.canada.ca/en/environment-climate-change/news/2019/12/government-of-canada-releases-emissions-projections-showing-progress-towards-climate-target.html>>.

- ii. What are the options available for considering GHGs in the IAA project-level assessment of the federal energy projects approval process?
  - iii. What are the challenges associated with available options?
3. How and to what extent have GHG emissions been considered in the energy approval process in the U.S?
  - i. How and to what extent have “direct” GHG emissions been considered in the energy approval process in the U.S?
  - ii. How and to what extent have “upstream” and “downstream” GHG emissions been considered in the energy approval process in the U.S?
4. To what extent may the IAA contribute to Canada achieving its *Paris Agreement* targets?

### **1.3 Research Methodology**

The thesis adopts a doctrinal and qualitative method to answer the questions above. In order to do so, the thesis engages both primary and secondary sources of legal documents.

The primary sources used in answering the research questions include the *Constitution Act*,<sup>7</sup> CEAA 2012, IAA 2019, EIA submissions, EIA panel reports and court decisions. The relevant materials from the primary resources were supported by relevant books and articles expounding on the provisions of the applicable legislation referenced in the thesis. Also, several government policies on climate change and EA were used as well as relevant CEAA and IAA registry documents on selected energy projects.

This thesis also explored how GHGs are considered in the EA process in the U.S. The U.S. is examined because of its legal, economic, and political integration with Canada. The Canadian and U.S. legal systems are partly integrated, and Canada tends to align with the U.S. in terms of

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<sup>7</sup> *Constitution Act, 1867* (UK), 30 & 31 Vict., c. 3 (U.K.), reprinted in RSC 1985, App. II, No. 5.

setting international targets.<sup>8</sup> The U.S. oil and gas sector is connected to Canada,<sup>9</sup> as are the automobile sectors.<sup>10</sup> There is an inconsistent application of GHG emissions in the environmental review process in the U.S. This thesis examines the GHG consideration of both jurisdictions in each's environmental review process. Observing the U.S. system is important because the U.S. EIA experience is a reasonably close comparator for germane Canadian law and policy.

This thesis takes a primarily descriptive approach but offers a normative view of Canada's IAA and its implications to Canada attaining its *Paris Agreement* targets.

#### **1.4 Structure of the Thesis**

This thesis has the following parts.

Chapter two provides an overview of climate change and GHGs legal frameworks to understand the connection between climate change, GHGs and EA. It provides a brief overview of international instruments that encourage the use of EA as a means of protecting the environment. This chapter examines the historical perspective of EA in Canada, looking at how EA has evolved. Chapter two lays the foundation for the discussion of GHGs in the EA process under the CEEA 2012 regime.

Chapter three presents an overview of the legislative framework of EA in the CEEA 2012. It examines the previous federal EA regime, in particular, the *National Energy Board Act* (NEBA) and the CEEA 2012. It explains how EA has evolved concerning the assessment of upstream and downstream GHGs in the EA assessment process in Canada at the federal level. It provides the

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<sup>8</sup> Ian F. Fergusson & Peter J. Meyer, "Canada-U.S. Relations" (14 June 2018) at 29-30, online (pdf): *Federation of American Scientist* < <https://fas.org/sgp/crs/row/96-397.pdf>>.

<sup>9</sup> *Ibid* at 30-32.

<sup>10</sup> Ian F. Fergusson, "CRS Report for congress, United States-Canada Trade and Economic Relationship: Prospects and Challenges" (29 January 2008) at 5, online (pdf): *EveryCRSReport* < [https://www.everycrsreport.com/files/20080129\\_RL33087\\_06ce8bbc8165efb4f3480dd88e9608684edcf95f.pdf](https://www.everycrsreport.com/files/20080129_RL33087_06ce8bbc8165efb4f3480dd88e9608684edcf95f.pdf)>.

ways in which EA is conducted at the federal level, which are the standard EA process and the review panel. Chapter three examines the various guidance on GHGs in the EA process in the CEAA 2012 regime. It provides an overview of how the EA process from a number of energy project assessments considers GHGs. The projects considered are the Energy East Project, the Northern Gateway Project, the Trans-Mountain Expansion Project, the Kearl Oil Sands and Jackpine Mine Expansion Projects, and the Frontier Project. The examination of these projects shows an uneven consideration of GHGs in the EA process.

Chapter four presents a review of the IA process of the IAA and how the IAA considers upstream and downstream GHGs in the IA process. It examines the IAA requirements for an IA. The IA stages are the planning stage, the assessment stage and the decision-making stage. The IAA makes an express provision for the consideration of climate change. This is different from the CEAA 2012, which did not have an express provision of GHGs or climate change as a consideration in the EA process.

The IAA is in the early stages of its implementation, and there are few applications of GHGs consideration in the IA of IAA. This chapter examines comments and criticisms of the IAA and final *Strategic Assessment of Climate Change (SACC)*. The chapter also examines the role of the IAA in achieving Canada's *Paris Agreement* goals.

Chapter five examines how upstream and downstream emissions are considered in the environmental review process in the U.S. It shows that there exist formal legal provisions that recognize GHGs in the U.S, but the way the U.S. regime is structured, there is an uneven application and ambiguity.

Chapter six presents recommendations for the Canadian EA system when it concerns the consideration of GHGs. It provides several normative claims concerning the impact of the IAA



in Canada achieving its *Paris Agreement* targets. There needs to be a clear, transparent, and effective IA process to ensure that EA grows in Canada.

Ultimately, this thesis finds that the Canadian IAA makes climate change a factor for consideration in the IA process. However, it only mandates the observation of upstream emissions but not downstream emissions. The thesis highlights the differences between the U.S. and Canada's EA consideration of emissions.

Canada has implemented a formal legislative process that recognizes GHG emissions as a consideration in the EA process. The thesis concludes that in this way, the IAA contributes to Canadian efforts to attain its *Paris Agreement* targets. The IAA provides an important step toward future improvements.

## Chapter 2: Overview: Environmental Impact Assessment in International Law and Canadian Law

### 2.1 Introduction

This chapter explains the importance of EIA in the fight against climate change in Canada. It lays the foundation to understand why and how GHGs (upstream and downstream emissions) have been considered in the EA process of energy projects in Canada.

This chapter begins with an overview of climate change and the various international instruments that encourage the use of EA to protect the environment. Chapter two also explores the historical perspective of EA and the legal framework of EA.

In the contemporary context, EAs of energy projects sometimes take into consideration climate change.<sup>1</sup> Thus, assessment processes must consider how the designated project will affect climate change and the GHGs targets of Canada.<sup>2</sup>

EAs is a method to address GHGs because they are structured to predict the consequences of the environmental impact by a proposed project through a series of analyses, observations, and data.<sup>3</sup> For an EA to be effective, Doelle posits several characteristics that must be present. That is, EA must be clear, open, certain and avoid ambiguity.<sup>4</sup> The characteristics mentioned must be coupled with transparency and public involvement.<sup>5</sup> Thus, if EA processes are clear, open, and

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<sup>1</sup> Robert B. Gibson, Meinhard Doelle & A. John Sinclair, “The Next Generation Environmental Assessment project” (3 August 2016) at 69-71, online (pdf): *UWaterloo* <[https://uwaterloo.ca/next-generation-environmental-assessment/sites/ca.next-generation-environmental-assessment/files/uploads/files/gibsondoellesinclair\\_nextgenea\\_monograph\\_3aug16.pdf](https://uwaterloo.ca/next-generation-environmental-assessment/sites/ca.next-generation-environmental-assessment/files/uploads/files/gibsondoellesinclair_nextgenea_monograph_3aug16.pdf)>.

;NovaScotia, “Guide to Considering Climate Change in Environmental Assessments in Nova Scotia” (2011) at 1, online (pdf): *NovaScotia* <<https://novascotia.ca/nse/ea/docs/EA.Climate.Change.Guide.pdf>>.

<sup>2</sup> Robert B. Gibson, Meinhard Doelle & A. John Sinclair, *supra* note 1.

<sup>3</sup> Meinhard Doelle, *The Federal Environmental Assessment Process: A Guide and Critique*, (Markham, Ont.: LexisNexis Canada, 2008) at 2.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid* at 3.

provide certainty as to the results of the assessment, then they can give legitimacy to projects, which might otherwise attract litigations and criticisms.<sup>6</sup>

This thesis will focus on upstream and downstream emissions from energy projects. Upstream emissions are emissions from upstream energy operations.<sup>7</sup> Upstream energy operations include exploration and production of oil and gas resources, while downstream energy operations deal with the delivery and supply of oil and gas resources.<sup>8</sup> The emissions from the upstream operations are the emissions that occur during the upstream operations of oil and gas resources.<sup>9</sup> In contrast, the downstream emissions are the emissions from the delivery and supply of oil and gas resources.<sup>10</sup> The consideration of direct emissions have been included in EA for some time, but there is less clarity and experience in terms of assessing the indirect emission, which results from upstream and downstream activities. This makes it a worthwhile area to research.

## 2.2 Overview of Climate Change

Empirical work clearly indicates that climate change is caused by the release of GHGs into the atmosphere.<sup>11</sup> Fossil fuels are the largest source of GHG emissions<sup>12</sup> because fossil fuels make up 80 percent of global energy production.<sup>13</sup>

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<sup>6</sup> *Nova Scotia*, *supra* note 1.

<sup>7</sup> “What is the upstream oil & gas industry?” (last visited 14 April 2020), online: PSAC <<https://www.pfac.ca/business/industry-overview/>>.

<sup>8</sup> *Ibid.*

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid.*

<sup>11</sup> EPA, “Global greenhouse gas emissions data” (last visited 25 July 2019), online: *United States Environmental Protection Agency* <<https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data>> [examples of GHGs that are released into the atmosphere include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O)]; Rebecca M. Henderson et al, “climate change in 2018: Implication for Business” (30 January 2018) at 2, online (pdf): *Havard Business School* <<https://www.hbs.edu/environment/Documents/climate-change-2018.pdf>>.

<sup>12</sup> *Rebecca*, *supra* note 11 at 2.

<sup>13</sup> Christina Nunez, “Fossil fuels, explained” (last visited 24 December 2019), online: *National Geographic* <<https://www.nationalgeographic.com/environment/energy/reference/fossil-fuels/>>.

Historically, the main cause of the pollution that leads to climate change is the GHG emissions of developed countries with large economies.<sup>14</sup> For example, Canada's total GHG emissions in 2018 equalled 729 megatonnes (Mt) of carbon dioxide equivalent.<sup>15</sup>

Although such countries largely caused the problem, Stavins astutely notes that, fair or not, addressing this problem is “nonexcludable,” which means that “it is difficult to exclude any individual or institution from the shared global benefits of emissions reduction undertaken by any localized actor.”<sup>16</sup> Thus, it is in the best interests of all if climate change mitigation is effective, which suggests global action is optimal.<sup>17</sup>

The *United Nations Framework Convention on Climate Change* (UNFCCC)<sup>18</sup> is the international legal framework for a global coordinated effort to combat climate change. The *Paris Agreement* is the most recent treaty under the UNFCCC.<sup>19</sup> It is hailed to be a landmark agreement for mitigation and adaptation to GHGs globally.<sup>20</sup> It sets out the overarching objective of stabilizing GHG levels in the atmosphere to prevent irreversible damage to the climate system.<sup>21</sup>

The *Paris Agreement* attracted broad support from governments, civil society, non-governmental organizations, and private industry. This provides hope that the world may be ready

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<sup>14</sup> Stavins R. et al, “International Cooperation: Agreements and Instruments” in Edenhofer, O. et al, eds, *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (United Kingdom and New York: Cambridge University Press, Cambridge, 2014) 1007.

<sup>15</sup> Government of Canada, “Greenhouse gas sources and sinks: executive summary 2020” (last visited 1 May 2020), online: *Government of Canada* < [<sup>16</sup> \*Ibid.\*](https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/sources-sinks-executive-summary-2020.html#toc3.></a></p></div><div data-bbox=)

<sup>17</sup> WCED, *Report of the World Commission on Environment and Development: Our Common Future*, (Oxford: Oxford University Press, 1987) < [>](https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf).

<sup>18</sup> *United Nations Framework Convention on Climate Change*, 12 June 1992, 1771 UNTS 107 art 1, 31 ILM 849 (entered into force 21 March 1994) [UNFCCC].

<sup>19</sup> “Paris Agreement”, 12 December 2015, FCCC/CP/2015/L.9/Rev.1 (entered into force 29 January 2016) (hereafter “Paris Agreement”).

<sup>20</sup> Tim Cadman, Rowena Maguire & Charles Sampford, *Governing the climate change regime: Institutional integrity and integrity systems* (Abingdon, Oxon; New York, NY: Routledge 2017) at 3-11.

<sup>21</sup> *Paris Agreement*, *supra* note 19 at art. 2.

to implement a serious plan to protect the environment from climatic changes and prevent the foreseeable devastation that climate change will surely cause.<sup>22</sup>

What are the ways to address the daunting challenges of climate change? Several mechanisms are available for policy-makers who are interested in reducing carbon emission.<sup>23</sup> EA is one of the tools for ensuring that the energy sector takes into account GHG emissions from specific projects. For jurisdictions that choose to use EA to implement climate change commitments, EAs can serve as planning tools that help ensure that projects are in line with the climate change commitments before the projects are approved.<sup>24</sup>

This chapter provides context for the rest of the thesis, offering perspectives regarding the climate change challenges and international instruments available to meet it. In particular, it examines the roles that EAs play in the Canadian context, their history, and how they have or have not incorporated climate change considerations. It also introduces the significant statutes, administrative processes, and judicial decisions that deal with EA processes.

### **2.3 Environmental Assessment**

The increasing demand for energy necessitates the development of energy infrastructure to foster development,<sup>25</sup> and with energy development comes the greater risk of environmental

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<sup>22</sup> IPCC, “Summary For Policymakers Of Ipcc Special Report On Global Warming Of 1.5°C Approved By Governments” (last visited 16 June 2020), online: *IPCC* <<https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/>>.

<sup>23</sup> Pacala, S. & R. Socolow, “Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies” (2004) 305:5686 *Science* 968-72 <<https://go-gale-com.ezproxy.lib.ucalgary.ca/ps/i.do?p=AONE&u=ucalgary&id=GALE%7CA121417118&v=2.1&it=r>>

<sup>24</sup> Robert B. Gibson et al., “From Paris to Projects Clarifying the implications of Canada’s climate change mitigation commitments for the planning and assessment of projects and strategic undertakings” (January 2019) at 7, online (pdf): *Metcalffoundation* <[https://metcalffoundation.com/site/uploads/2019/01/Metcalf\\_SReport-19-01-2019\\_CMYK.pdf](https://metcalffoundation.com/site/uploads/2019/01/Metcalf_SReport-19-01-2019_CMYK.pdf)>.

<sup>25</sup> OECD, “OECD Green Growth Studies: Energy” (last visited 30 July 2019) at 1, online (pdf): *OECD* <<https://www.oecd.org/greengrowth/greening-energy/49157219.pdf>>.

pollution. Although the price of oil globally has been on the decline,<sup>26</sup> there still exist several oil and gas projects that are in the review process for government approval.

An EA amounts to a review process for ascertaining how a proposed project will impact the environment. It serves as a planning tool to safeguard the environment.<sup>27</sup> Such reviews are carried out by an administrative agency before a proposed project is approved.<sup>28</sup> Several factors are usually considered in an EA process.<sup>29</sup>

EA has several objectives, as articulated by the International Association for Impact Assessment. For example, EA objectives include considering the potential risks to the environment, taking steps to mitigate such risks, and ensuring effective resource management.<sup>30</sup>

In the Canadian context, the Supreme Court of Canada (SCC) provides a succinct definition in the landmark case of *Friends of the Oldman River Society*.<sup>31</sup> The SCC defined EA as a planning tool that gives the decision-maker in an EA process the grounds for deciding on a designated project. The decision-maker can choose to accept or deny the construction of a designated project.<sup>32</sup>

The SCC highlights several integral matters which form the essence of EA, and the realizations of these matters or concepts make for its effective application. The first underlying concept behind EA is the early identification of potential environmental adverse effects from a proposed project.<sup>33</sup> This is particularly important because the overall essence of EA is preemptive

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<sup>26</sup> Erica Alini & Andrew Russell "What the oil plunge means for Canada and Alberta" *Global News* (last modified 9 March 2020) <<https://globalnews.ca/news/6649905/oil-price-plunge-impact-canada-alberta/>>.

<sup>27</sup> *OECD*, *supra* note 25 at 1.

<sup>28</sup> Impact Assessment Agency of Canada, "Basics of Environmental Assessment" (last visited 20 December 2019), online: *Government of Canada* <<https://www.canada.ca/en/impact-assessment-agency/services/environmental-assessments/basics-environmental-assessment.html#ceaa03>>.

<sup>29</sup> *Ibid.*

<sup>30</sup> *Ibid.*; Brenda Heelan Powell, "Environmental Assessment & the Canadian Constitution: Substitution and Equivalency" (2014) at 8, online (pdf): *Environmental Law Centre Albert Law Foundation* <<http://elc.ab.ca/media/94543/EACConstitutionBriefFinal.pdf>>.

<sup>31</sup> *Friends of the Oldman River Society v Canada (Minister of Transport)*, [1992] 1 S.C.R. 3 at 71.

<sup>32</sup> *Ibid.*

<sup>33</sup> *Ibid.*

to predict, avoid and minimize damaging impacts on the environment. This may pertain to a range of adverse effects from energy projects.<sup>34</sup> As the SCC noted in the *Friends of the Oldman River Society* case, EA seeks to strike a balance between the development of energy projects and safeguarding the environment.<sup>35</sup>

EA is a veritable tool in protecting the environment – including the climate – from the adverse effects of resource development. In Canada, energy projects must be reviewed through such an EA system.

## **2.4 EA in International Climate Agreements**

Canada’s EA process has been influenced by international law. A number of international examples are introduced below. Some pertain to climate change, and others do not. Some of the international instruments mentioned below do not expressly mention EA. Still, they encourage the use of methods that can prevent environmental pollution and degradation, and EA is a method that can protect the environment from harmful effects from projects.

### **2.4.1 Stockholm Declaration**

The United Nations Conference on the Human Environment was held in Stockholm in 1972,<sup>36</sup> and a series of declarations were made to preserve and enhance the environment.<sup>37</sup> Although the *Stockholm Declaration* does not expressly mention EA, principle 5 of the declaration enhanced the idea of preservation of the environment.<sup>38</sup> The provision stipulates that “the non-renewable resources of the earth must be employed in such a way as to guard against the danger of

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<sup>34</sup> “What is impact assessment?” (27 April 2019), online: *Convention on Biodiversity* <<https://www.cbd.int/impact/whatis.shtml>>.

<sup>35</sup> *Friends of the Oldman River Society v Canada (Minister of Transport)*, *supra* note 31.

<sup>36</sup> IPCC, “Declaration of the United Nations Conference on the Human Environment” (last visited 25 June 2019) at 1, online (pdf) : *IPCC* <[https://www.ipcc.ch/apps/nj-lite/srex/nj-lite\\_download.php?id=6471](https://www.ipcc.ch/apps/nj-lite/srex/nj-lite_download.php?id=6471)>.

<sup>37</sup> *Ibid.*

<sup>38</sup> *Meinhard Doelle*, *supra* note 3 at 39.

their future exhaustion and to ensure that benefits from such employment are shared by all mankind.”<sup>39</sup> Principle 5 sets out the underlying purpose of EA, which is to use an effective assessment process to ensure that energy projects are developed in a sustainable manner that seeks to utilize resources while protecting the environment responsibly. The *Stockholm Declaration* mandates the protection of the environment with effective tools and measures. Such measures include EA because EA helps regulators to screen projects that will have harmful or negative effects on the environment.

#### **2.4.2 The United Nations Convention on the Law of the Sea (UNCLOS)**

UNCLOS provides for EA,<sup>40</sup> and in article 206, the convention provides that EA should be used to protect the marine environment.<sup>41</sup> States are urged to curb pollution from projects that have the likelihood of harming the marine environment. The action to curb pollution is by assessing the potential effects of such projects.<sup>42</sup> This provision by UNCLOS is urging the use of EA to ensure that the marine environment is protected from harmful pollution.<sup>43</sup> Although this does not expressly make reference to GHGs, it shows the intended use of EA as a tool to assess the potential adverse effect on the environment and demonstrates the evolution of EA in international law.

#### **2.4.3 Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention)**

The Espoo Convention was adopted in 1991 and came into force on September 10, 1997; the Espoo Convention was an important development for EA in international law.<sup>44</sup> The convention

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<sup>39</sup> IPCC, *supra* note 36.

<sup>40</sup> Meinhard Doelle, *supra* note 3 at 40.

<sup>41</sup> *United Nations Convention on the Law of the Sea* (“UNCLOS”), 10 December 1982, 21 I.L.M. 1261, Article 206.

<sup>42</sup> *Ibid.*

<sup>43</sup> *Ibid.*

<sup>44</sup> UNECE, “ESPOO Convention” (last visited 23 December 2019), online: UNECE <<https://www.unece.org/environmental-policy/conventions/environmental-assessment/about-us/espoo-convention/enveiaeia/more.html>>.



creates a legal obligation for states to ensure that EA is conducted when any project is likely to impact the environment in a trans-boundary situation.<sup>45</sup> Thus, if a project in a country is likely to cause a significant adverse effect on other countries, then it is mandated that EA be conducted to assess the environmental effects at the planning stage of the project.<sup>46</sup>

The Espoo Convention goes a step further on EA to state when and how an EA should be conducted. Article 2(2) of the convention stipulates a series of activities that would need an EA for transboundary impacts, which are set out in appendix 1 of the Espoo Convention. The activities stated in appendix 1 relate to trans-boundary energy projects that would require an EA.<sup>47</sup> The activities that are set out in appendix 1 of the Espoo Convention include crude oil refineries and nuclear power facilities.<sup>48</sup> Thus, stating that EA should be conducted for energy projects that have a trans-boundary environmental impact. It suffices to say that the Espoo Convention was a big leap in the development of EA in the international scene.

#### **2.4.4 The United Nations Framework Convention on Climate Change (UNFCCC)**

The UNFCCC provides the core framework for climate change mitigation, and it recommends EA mechanisms.<sup>49</sup> Specifically, article 4(f) stipulates that countries should take responsibility for climate change mitigation and adaptation. Steps should be taken to preserve the quality of the environment and the climate.<sup>50</sup> This provides a foundation for incorporating climate change into the EA process for energy projects.<sup>51</sup> The signatories are required to take measures to

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<sup>45</sup> *Ibid.*

<sup>46</sup> *Ibid.*

<sup>47</sup> UNECE, "Text of the convention: ESPOO Convention" (last visited 23 December 2019), online: *UNECE* <[https://www.unece.org/env/eia/about/eia\\_text.html#appendix1](https://www.unece.org/env/eia/about/eia_text.html#appendix1)>

<sup>48</sup> *Ibid.*

<sup>49</sup> Sok, Vong, Bryan J. Boruff, and Angus Morrison-Saunders. "Addressing Climate Change through Environmental Impact Assessment: International Perspectives from a Survey of IAIA Members." *Impact Assessment and Project Appraisal* 29.4 (2011): 317-318.

<sup>50</sup> *UNFCCC*, *supra* note 18 at art. 4(f).

<sup>51</sup> *Ibid* at art. 3.

reduce the adverse effects of GHGs and to ensure climate change adaptation in the EA process of energy projects.<sup>52</sup> Some of the measures that parties must take to address climate change include taking precautionary measures through government programmes and policies like EA.<sup>53</sup>

#### **2.4.5 Montreal Protocol**

Discussions on international negotiations on climate change cannot be made without referring to the *Montreal Protocol*. The *Montreal Protocol* laid the groundwork for global attention to climate change.<sup>54</sup> Former United Nations Secretary-General Kofi Annan regarded the agreement as “the most successful international agreement to date,”<sup>55</sup> as it succeeded in ameliorating the problems of the ozone layer depletion.<sup>56</sup> One hundred and ninety-six states and the European Union signed the *Montreal Protocol*, and the protocol initiates the phasing out of Chlorofluorocarbons (CFC), which hastened the ozone depletion. It contains financial provisions to assist in phaseouts.<sup>57</sup> Also, it was legally binding, and it made concessions to poorer countries in the use of CFC for a period.<sup>58</sup>

#### **2.4.6 Kyoto-Protocol**

On the reasoning of the *Montreal Protocol*, the *Kyoto-Protocol* —a climate treaty— was adopted by categorizing countries based on developed countries (found in Annex B of the Protocol) and developing countries (Non-Annex B), respectively.<sup>59</sup> Thus, mandating that developed countries limit emissions subject to a signed binding legal target and developing countries given

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<sup>52</sup> *Ibid.*

<sup>53</sup> *Ibid.*

<sup>54</sup> Brad Plumer “Past climate treaties failed. So the Paris deal will try something radically different”, *Vox* (14 December 2015) < <https://www.vox.com/2015/12/14/10105422/paris-climate-deal-history>>.

<sup>55</sup> *Ibid.*

<sup>56</sup> Patrick Low “Why the Montreal Protocol is the most successful climate agreement ever”, *South China Morning Post* (26 October 2016) < <https://www.scmp.com/>>.

<sup>57</sup> *Ibid.*

<sup>58</sup> *Ibid.*

<sup>59</sup> Brad Plumer, *supra* note 54.

certain exemption based on their per-capita emissions.<sup>60</sup> Hence, the *Kyoto-Protocol* was built on common but differentiated responsibilities pursuant to article 4 of UNFCCC.<sup>61</sup> The exemption the *Kyoto-Protocol* gave to developing countries like China and India gave them a license to pollute, and this led to a bolstering economy.<sup>62</sup> In response to this growth, the U.S. left the agreement, and other developed countries followed suit, thereby ending the practice of “equitable burden-sharing arrangement” for reducing GHGs globally.<sup>63</sup>

The 1997 *Kyoto Protocol* has similar provisions to the UNFCCC on EA by mandating parties to take into account climate change adaptation and mitigation efforts, as provided in article 3 of the UNFCCC.<sup>64</sup>

Article 3 encourages the parties to the agreement to take precautionary measures to anticipate, prevent or minimize climate change and its effects. GHG emissions are a major cause of climate change, and one of the precautionary steps that can be taken to protect the environment from climate change is by conducting an EA before the construction of an energy project that emits harmful GHGs to the atmosphere. Once the EA is conducted, the regulatory bodies that govern the EA process then decide based on available scientific findings whether such projects should be approved in light of several factors for consideration like adverse environmental effects from the project, public interest, economic benefits, and adaptation and mitigation measures.

Some of the efforts to address the issue of climate change provided by the UNFCCC include scientific, educational, and technological innovations and activities; also, parties must ensure that

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<sup>60</sup> *Ibid.*

<sup>61</sup> Clémençon, Raymond. "The Two Sides of the US Agreement: Dismal Failure or Historic Breakthrough?" (2016) 25:1 *The Journal of Environment & Development* 4 <<https://journals.sagepub.com/doi/pdf/10.1177/1070496516631362>>.

<sup>62</sup> Amanda M. Rosen, "The Wrong Solution at the Right Time: The Failure of the Kyoto Protocol on Climate Change" (2015) 43.1 *Politics & Policy* 31-32 <<https://onlinelibrary.wiley.com/doi/pdf/10.1111/polp.12105>>.

<sup>63</sup> *Clemençon, supra* note 61 at 5.

<sup>64</sup> *Sok, supra* note 49 at 317.

government laws, policies and plans reflect climate adaption and mitigation measures which cover the EA field.<sup>65</sup> Articles 2(3); 3(14); 12(3); 12(5); and 13(4) specifically speak on the consideration of climate change in EA.<sup>66</sup>

For example, article 2(3)<sup>67</sup> and article 3(14)<sup>68</sup> urges member states to implement policies that mitigate the adverse effects of climate change on the environment. Also, parties are to take steps to reduce emissions by designated operational entities or institutions.<sup>69</sup>

In an effort to address the problems associated with the *Kyoto-Protocol*, an international meeting entitled the Copenhagen Talks occurred, but these talks were insufficient to address the problems that plagued the *Kyoto-Protocol*.<sup>70</sup> The hurdle to moving forward appeared to be the mandate to all countries regardless of whether they were rich or poor to make commitments. Countries like China and India resisted submitting to a legally binding goal of climate change mitigation and adaptation, requesting that richer countries like the United States, Canada, and the countries of the European Union bear most of the burden.<sup>71</sup> In the end, the *Kyoto-Protocol* proved to be inadequate in addressing the problems of climate change.

#### **2.4.7 The Paris Agreements**

The *Paris Agreement*<sup>72</sup> is regarded as a landmark environmental treaty, which showcases international law as a tool to combat climate change, adopting the first-ever universally recognized legally binding climate deal.<sup>73</sup> The *Paris Agreement* is aimed at limiting warming to 1.5 to 2°C

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<sup>65</sup> UNFCCC, *supra* note 18 at art. 4(f).

<sup>66</sup> Sok, *supra* note 49 at 317.

<sup>67</sup> UNFCCC, *supra* note 18 at art. 2.3.

<sup>68</sup> *Ibid* at art. 3.14.

<sup>69</sup> *Ibid* at art. 12.5

<sup>70</sup> Brad Plumer, *supra* note 54.

<sup>71</sup> *Ibid*.

<sup>72</sup> *Paris Agreement*, *supra* note 19.

<sup>73</sup> See generally “was the Paris Agreement on climate change a success?” (16 May 2017), online: *A Level of Politics* <<http://alevelpolitics.com/was-the-paris-agreement-on-climate-change-a-success/>>.

above pre-industrial levels through mitigation, adaptation, and finance.<sup>74</sup> The mode to achieve the goals set out in the *Paris Agreement* is for parties to develop nationally determined contributions (NDCs) for the reduction of GHGs—NDCs are individual parties’ national plan to address climate change.<sup>75</sup>

The *Paris Agreement* has the central goal of meeting the objectives of the UNFCCC on mitigation and adaptation to climate change.<sup>76</sup> Eero Palmujoki<sup>77</sup> argues that the UNFCCC’s mandate of addressing the effects of climate change on the environment is in line with the central mechanism for actualizing the *Paris Agreement* targets.<sup>78</sup> An NDC is a summary of a country’s goals and plans to attain the Paris Agreement targets.<sup>79</sup> Pursuant to article 4(2) of the *Paris Agreement*, each party to the *Paris Agreement* is to use the NDC process to reduce its GHG emissions.<sup>80</sup>

The *Paris Agreement* is an international starting point for countries to legislate EA laws and policies that seek to reduce GHGs and ensure climate change adaptation and mitigation. Article 4(2) requires that NDCs should progress over time; thus, an interpretation is that policies and laws on EA should not be stagnant, but rather, they should develop.<sup>81</sup> The development of the NDCs

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<sup>74</sup> UNFCCC, “Nationally Determined Contributions (NDCs)” (last visited 30 July 2019), online: *United Nations Climate Change* < <https://unfccc.int/process/the-paris-agreement/nationally-determined-contributions/ndc-registry>>.

<sup>75</sup> *Paris Agreement*, *supra* note 19 at art. 4(2).

<sup>76</sup> Tim Cadman et al, “Governing the climate regime” in Tim Cadman, Rowena Maguire & Charles Sampford, eds, *Governing the climate change regime: Institutional integrity and integrity systems* (Abingdon, Oxon; New York, NY: Routledge, 2017) at 3-11.

<sup>77</sup> Eero Palmujoki, “Institutions, institutional practices, and global climate change governance” in Tim Cadman, Rowena Maguire & Charles Sampford, eds, *Governing the climate change regime: Institutional integrity and integrity systems* (Abingdon, Oxon; New York, NY: Routledge, 2017) at 70.

<sup>78</sup> *Paris Agreement*, *supra* note 19 at art. 4(2).

<sup>79</sup> “Nationally Determined Contributions (NDCs)” (last visited 23 December 2019), online: *UNFCCC* < <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs>>.

<sup>80</sup> *Paris Agreement*, *supra* note 19 at art. 4(2).

<sup>81</sup> Lavanya Rajamani & Jutta Brunne’c, “The Legality of Downgrading Nationally Determined Contributions under the Paris Agreement: Lessons from the US Disengagement” (2017) 29:3 *Journal of Environmental Law* 537 at 541.

should reflect the highest possible ambition, and this is supported by articles 3<sup>82</sup> and 4(3)<sup>83</sup> of the *Paris Agreement*.<sup>84</sup>

The NDCs in the *Paris Agreement* are avenues by which member states can initiate policies, plans, regulations, laws, and other instruments that can adapt uniquely to the environment and energy challenges of each state. Thus, NDCs may encourage the use of tools like EA to ensure parties meet their Paris goals and for states to prevent excessive GHGs in their jurisdiction.<sup>85</sup>

In conclusion, there has not been an EA specific related international law or agreement, but the international agreements above indicate that EA is one of the ways to mitigate climate change. The national EA policy is the proper way to reduce GHG emissions and ensure that international direction on developing EA is reflected in the national sphere.

## **2.5 EA in the Canadian Context**

### **2.5.1 Historical Perspective of EA**

Overtime, EA has gone through a significant change in Canada from 1972 to date.<sup>86</sup> Canadian action on EA drew on the international context described above but was also heavily influenced by the 1969 U.S. EA legislation.<sup>87</sup> Canada's initial formal step on EA was not a law but

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<sup>82</sup> *Paris Agreement*, *supra* note 19 at art. 4(3).

<sup>83</sup> *Ibid* at art. 4(3).

<sup>84</sup> *Rajamani & Brunnée*, *supra* note 81 at 543.

<sup>85</sup> Benoit Maye, "Climate Assessment as an Emerging Obligation Under Customary International Law" (2019) 68:2 *International and Comparative Law Quarterly* 271-274 <[https://www-cambridge-org.ezproxy.lib.ucalgary.ca/core/services/aop-cambridge-core/content/view/2D0D42C4E488EC511088A30BF3B75429/S0020589319000095a.pdf/climate\\_assessment\\_as\\_an\\_emerging\\_obligation\\_under\\_customary\\_international\\_law.pdf](https://www.cambridge-org.ezproxy.lib.ucalgary.ca/core/services/aop-cambridge-core/content/view/2D0D42C4E488EC511088A30BF3B75429/S0020589319000095a.pdf/climate_assessment_as_an_emerging_obligation_under_customary_international_law.pdf)>; *Robert B. Gibson et al.*, *supra* note 24 at 134-140; B Mayer, 'The Relevance of the No-Harm Principle to Climate Change Law and Politics' (2016) 19 *APJEL* 79; B Mayer, 'Construing International Climate Change Law as a Compliance Regime' (2018) 7 *TEL* 115; B Mayer, 'The Applicability of the Principle of Prevention to Climate Change: A Response to Zahar' (2015) 5 *Climate Law* 1.

<sup>86</sup> Robert B. Gibson, "From Wreck Cove to Voisey's Bay: the evolution of federal environmental assessment in Canada" (2002) 20:3 *Impact Assessment and Project Appraisal* 151 at 153 <<https://www.tandfonline.com/doi/pdf/10.3152/147154602781766654>>. It is important to note that the first EA statute in Canada was by the Ontario provincial government. The Ontario EA legislation was modelled after U.S NEPA that sought to consider the environmental, social, cultural and biophysical effects of projects.

<sup>87</sup> Sandra M.C. Weston, "The Canadian Federal Environmental Assessment and Review Process: An Analysis of the Initial Assessment Phase" (1991) at 5, online (pdf) : *Government of Canada* <[http://publications.gc.ca/collections/collection\\_2017/acee-ceaa/En107-3-21-1992-eng.pdf](http://publications.gc.ca/collections/collection_2017/acee-ceaa/En107-3-21-1992-eng.pdf)>.

a federal government policy, which was a non-binding, non-legislated process at the federal level before the advent of a more structured, legislated instrument binding on the government and parties involved.<sup>88</sup> The policy structure of EA in 1972 came in the form of a requirement by the federal government requiring that new projects under its jurisdiction must be assessed for any potential adverse effect on the environment.<sup>89</sup> Thus, any project with the likelihood of a significant adverse effect would have required assessment by Environment Canada.<sup>90</sup> One of the reasons Canada decided to have a policy-oriented EA system as opposed to a legislated EA system like the U.S. was due to some factors including the fear of litigation, which gives courts more power and say over project approvals and control and may delay the process of assessment and decision making.<sup>91</sup> Also, avoiding any event that might tamper with the federal government's discretion to approve and disapprove projects, as well as avoiding exposure to an increase in public scrutiny over EA activities.<sup>92</sup>

EA in Canada has evolved from being just a government policy to legislation in the federal and provincial jurisdictions.<sup>93</sup> Thus, EA in the form of legislation has been the practice to date in Canada.<sup>94</sup>

The Federal Government of Canada began to take more action on EA.<sup>95</sup> In 1972, the Federal Cabinet established the federal environmental assessment review office.<sup>96</sup> The federal

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<sup>88</sup> *Meinhard Doelle, supra note 3 at 1-2.*

<sup>89</sup> *Robert B. Gibson, supra note 86 at 153.*

<sup>90</sup> *Ibid.*

<sup>91</sup> *Ibid.*

<sup>92</sup> *Ibid.*

<sup>93</sup> *Meinhard Doelle, supra note 3 at 2.*

<sup>94</sup> *Ibid.*

<sup>95</sup> *Robert B. Gibson, supra note 86 at 154.*

<sup>96</sup> *Meinhard Doelle, supra note 3 at 6.*

environmental assessment review office was assigned the responsibility of overseeing the non-legislative EA process in Canada.<sup>97</sup>

As a result of the report of the Environment Canada Task Force, the Federal Environmental Assessment and Review Process (EARP) was established in 1973.<sup>98</sup> The EARP aimed to “implement the federal government’s policy on EIA and to incorporate environmental and related social factors into federal government planning and decision making.”<sup>99</sup> The 1973 Directive extended the purview of EA from federal projects to private projects with federal solicited funds or federal property.<sup>100</sup> It also mandated that environmental problems be given the same attention as economic and social concerns.<sup>101</sup>

The period from 1974 to 1980 saw the formalization and strengthening of the EA process in Canada. Central to this growth was the Berger Inquiry on the proposed Mackenzie Valley Pipeline that was instituted by order of the Privy Council.<sup>102</sup> The Berger Inquiry was to make findings on the application by energy companies to develop three projects in the northern territories – the Arctic Gas Pipeline, the Foothills Pipeline and the Mackenzie Gas Project.<sup>103</sup>

The privy council order granted Justice Berger a broad scope of powers as he was given the discretion and power to conduct EA by conducting hearings, summon witnesses, formulating rules, practices and procedures, and permitting expert submission on the proposed project.<sup>104</sup> The Berger Inquiry set a strong conceptual precedent for federal EA by holding hearings that included affected

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<sup>97</sup> *Ibid.*

<sup>98</sup> *Sandra, supra* note 87 at 5.

<sup>99</sup> *Ibid.*

<sup>100</sup> *Meinhard Doelle, supra* note 3 at 6.

<sup>101</sup> *Sandra, supra* note 87 at 5.

<sup>102</sup> *Meinhard Doelle, supra* note 3 at 6.

<sup>103</sup> James H. Marsh & Nathan Baker “Mackenzie Valley Pipeline Proposals” (last modified 21 March 2018), online: *The Canadian Encyclopedia* < <https://www.thecanadianencyclopedia.ca/en/article/mackenzie-valley-pipeline>>; François Bregha, *Bob Blair's Pipeline : The Business and Politics of Northern Energy Development Projects* (Toronto: Lorimer, 1979) 1-8.

<sup>104</sup> *Ibid.*



communities, indigenous people, and individuals interested in contributing to the process.<sup>105</sup> The Berger Inquiry considered how the proposed project affects “the biophysical environment, public health, education, social services, energy supply, employment, economic growth, the renewable resource base, transportation and communications.”<sup>106</sup> Experts were brought in to prepare a technical report under the auspices of the Pipeline Application Assessment Board.<sup>107</sup> The Berger Inquiry set the framework for what we know to be EA in Canada.<sup>108</sup> Justice Berger provided the groundwork for the growth of EA in Canada.

The Canadian regime on EA became more strengthened after the *EARP Guidelines Order* (EARPGO) was passed in 1984. These guidelines were to be applied to “proposals that are initiatives, undertakings, and activities for which the federal government has a decision-making responsibility.”<sup>109</sup> The EARPGO had several court challenges and several criticisms of the process, which was one of the reasons the government initiated an EA bill.<sup>110</sup> At first, the federal departments regarded EARPGO as a process that is discretionary and non-binding.<sup>111</sup> However, the Federal Court in the *Canadian Wildlife* case<sup>112</sup> and the SCC in the *Friends of the Oldman River Society* case found the federal government’s interpretation to be incorrect.<sup>113</sup> “The Courts determined that EARPGO was applicable whenever the federal government had an affirmative regulatory duty related to a proposed initiative, undertaking or activity.”<sup>114</sup>

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<sup>105</sup> *Meinhard Doelle, supra* note 3 at 7.

<sup>106</sup> *Ibid.*

<sup>107</sup> *Ibid.*

<sup>108</sup> *Ibid.*

<sup>109</sup> *Ibid* at 9.

<sup>110</sup> *Ibid.*

<sup>111</sup> *Brenda Heelan Powell, supra* note 30 at 9.

<sup>112</sup> *Canadian Wildlife Federation Inc. v Canada (Minister of Environment)*, [1989] 3 F.C. 309 (T.D.), aff’d (1989) 99 N.R. 72

<sup>113</sup> *Brenda Heelan Powell, supra* note 30 at 9.

<sup>114</sup> *Ibid.*

This action paved the way for the CEAA, which was passed in 1992 and came into force in 1995.<sup>115</sup> As required under the statute, a review of the CEAA 1995 was conducted, and the changes came into effect in 2003.<sup>116</sup> There were no significant amendments, but notable changes that were made included the centralization of information and transitioning from hard copy to electronic access, streamlining of some decision making, and strengthening of public involvement.<sup>117</sup>

Then the CEAA 1995 was repealed and replaced with the CEAA 2012, which came into force on July 6, 2012. Although Canada had begun making progress in formulating a standard EA system, the CEAA 2012 had several setbacks.<sup>118</sup> The federal government sought to amend the EA process by including the amendments in the *2010 Budget Implementation Bill*.<sup>119</sup> The then Harper Government embarked on the amendment of the CEAA on the promise of promoting efficiency in the EA process.<sup>120</sup> As the then Environment Minister Peter Kent stated, the “changes will make the process more predictable and timely, reduce duplication, strengthen environmental protection, and enable meaningful consultation with Aboriginal peoples.”<sup>121</sup>

However, the amendments made to the EA process in the CEAA 2012 changed the way an EA process was triggered.<sup>122</sup> CEAA 2012 abandoned the legal test, which involved the “definition of a project and its potential impacts, the law list and various exclusions, to a project list process with a great deal of discretion built into the process,”<sup>123</sup> thereby removing the legal certainty in the

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<sup>115</sup> *Meinhard Doelle*, *supra* note 3 at 10.

<sup>116</sup> *Brenda Heelan Powell*, *supra* note 30 at 9.

<sup>117</sup> *Robert B. Gibson*, *supra* note 86 at 155.

<sup>118</sup> *Robert B. Gibson, Meinhard Doelle & A. John Sinclair*, *supra* note 1 at 2-3.

<sup>119</sup> Meinhard Doelle, "CEAA 2012: The End of Federal EA as We Know It?" (2012) 24:1 J.E.L.P 1.

<sup>120</sup> Nigel Kinney, *The Harper Record 2008-2015*, ed by Stuart Rew & Teresa Healy (Canadian Centre for Policy Alternatives, 2015) 337-338.

<sup>121</sup> Peter Kent's testimony at Subcommittee on Bill C-38 (Part III) of the Standing Committee on Finance on May 7, 2012.

<sup>122</sup> Meinhard Doelle & Chris Tollefson, *Environmental Law : Cases and Materials*, 3<sup>rd</sup> ed (Toronto: Carswell, 2019) at 603.

<sup>123</sup> *Meinhard Doelle*, *supra* note 119 at 3.

old process.<sup>124</sup> The CEAA 2012 eliminated the two EA process options.<sup>125</sup> There was a combination of screenings and comprehensive studies, which was narrower in scope than the CEAA 1995 stand-alone screening or comprehensive study process.<sup>126</sup> The scope of EA was narrowed down “from a generally inclusive approach that tried to look at a broad range of adverse environmental effects of proposed projects to one that is focused on a few issues within the direct regulatory authority of the federal government.”<sup>127</sup> The CEAA 2012 amendments led to fewer federal EAs.<sup>128</sup> This led to some criticisms that the CEAA 2012 undermined the growth of EA in Canada.<sup>129</sup>

The CEAA 2012 was repealed and replaced with the IAA 2019.<sup>130</sup> The repealing of the CEAA 2012 was in line with the government’s commitment to revamp the EA process and to restore public confidence in the process.<sup>131</sup> This thesis will discuss in later chapters the transition from the CEAA 2012 to the IAA and how the change affects EA in Canada.

## **2.5.2 Legal and Regulatory Changes on GHG in Canada**

The previous EA processes have been criticized for several reasons. Some of these include the lack of proper consideration of GHGs in the assessment process.<sup>132</sup> Thus, the federal government took a step to address several concerns and designed a new way in which

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<sup>124</sup> *Ibid.*

<sup>125</sup> *Ibid* at 4.

<sup>126</sup> *Ibid.*

<sup>127</sup> *Ibid.*

<sup>128</sup> *Ibid.*

<sup>129</sup> *Ibid* at 2-4.

<sup>130</sup> *Meinhard Doelle, supra* note 3 at 9.

<sup>131</sup> Canada, Office of the Prime Minister, “Minister of Environment and Climate Change Mandate Letter,” by Rt. Hon. Justin Trudeau, PC, MP, Prime Minister of Canada (Ottawa: November 2015), online: Government of Canada <<http://pm.gc.ca/eng/Ministerenvironment-and-climate-change-mandate-letter>>.

<sup>132</sup> Meinhard Doelle, “Integrating climate change into EA: Thoughts on federal law reform” (18 October 2016), online (blog): *Dalhousie University blogs* <<https://blogs.dal.ca/melaw/2016/10/18/integratingclimate-change-into-ea-thoughts-on-federal-law-reform/>>.

environmental assessments and regulatory reviews will be conducted.<sup>133</sup> The mandate of this new approach was to analyze the weaknesses of the past and then review and modernize environmental assessments and regulatory processes in Canada.<sup>134</sup> Thus, the desire to review and modernize the EA regime in Canada brought about the establishment of the expert panel review on federal environmental assessment processes<sup>135</sup> and an expert panel on modernizing the National Energy Board (NEB).<sup>136</sup> In parallel, the government put in place interim rules on pipeline reviews, and based on these rules, Environment and Climate Change Canada assessed the upstream greenhouse gas emissions associated with the Trans-Mountain Expansion Project.<sup>137</sup> The Government of Canada, on the 21<sup>st</sup> of June, 2019, finally passed the much-awaited Bill C-69, and it is now called the *Impact Assessment Act*.<sup>138</sup> Requirements under the new regime are discussed in more detail below.

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<sup>133</sup> Chris Tollefson, "Canada's current environmental assessment law: a tear-down not a reno" (13 July 2016), online: Policy Options Politiques < <https://policyoptions.irpp.org/magazines/july-2016/canadas-current-environmental-assessment-law-a-tear-down-not-a-reno/>>.

<sup>134</sup> Environment and Natural Resources, "Environmental and Regulatory Reviews: Proposed Approach" (last visited April 25 2019), online: *Government of Canada* < <https://www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews/share-your-views/proposed-approach.html>>.

<sup>135</sup> Environment and Natural Resources, "A proposed new impact assessment system" (last visited April 25 2019), online: *Government of Canada* < <https://www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews/environmental-assessment-processes.html>>; *Impact Assessment Act*, SC 2019, c. 28.

<sup>136</sup> *Environment and Natural Resources*, *supra* note 134.

<sup>137</sup> Interim Rules for Pipeline Reviews, "trans mountain expansion project" (last visited April 25 2019), online: *Major Projects Management Office* <<https://mpmo.gc.ca/measures/256>>.

<sup>138</sup> *Impact Assessment Act*, *supra* note 135.

## Chapter 3: GHGs in EA Under the Canadian Environmental Assessment Act 2012

### 3.1 Introduction

EAs are assessment tools used by government agencies to ensure that industrial projects meet environmental standards. Such tools help a government determine whether a project should proceed and, if so, under what conditions.<sup>1</sup> They do this by providing insight into the predicted effects that a proposed project will have on the environment.<sup>2</sup> Thus, when used properly, EAs can be a valuable element of any government's environmental protection plan.<sup>3</sup>

This chapter focuses on the Canadian government's use of EAs to ensure that energy projects meet environmental standards.<sup>4</sup> In particular, it examines the legislative framework of the IAA's predecessor found in the NEBA and the CEAA 2012. Exploring the NEBA and CEAA 2012 helps to understand how EAs were conducted historically, laying a foundation for discussion in further chapters on how EA has evolved concerning the assessment of GHGs.

Accordingly, this chapter introduces the various guidance on the evaluation of GHG emissions in the EA process under CEAA 2012, before reviewing how they were implemented in the Energy East Project, the Northern Gateway Project, the Trans-Mountain Expansion Project, the Kearl Oil Sands and Jackpine Mine Expansion Projects, and the Frontier Project. By reviewing

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<sup>1</sup> David Boyd, *Unnatural Law: Rethinking Canadian Environmental Law and Policy*, (Vancouver: UBC Press, 2003) at 149.

<sup>2</sup> Sierra Club of BC Foundation, "Considering Climate Change in the Federal EA process: A Submission to the EA Review Expert Panel" (last visited 18 September 2019) at 2, online (pdf): *Sierra Club BC* <[https://sierraclub.bc.ca/wp-content/uploads/Sierra-Club-BC\\_EA-Review-Submission.pdf](https://sierraclub.bc.ca/wp-content/uploads/Sierra-Club-BC_EA-Review-Submission.pdf)>.

<sup>3</sup> Adrian Debi, *Comparing Provincial EA: A Comparative Analysis of Five Canadian Provincial Approaches to Municipal EA* (Masters Major Research Paper, York University, 2017) [unpublished]

<sup>4</sup> David Boyd, *Unnatural Law: Rethinking Canadian Environmental Law and Policy*, (Vancouver: UBC Press, 2003) at 149.

these projects, the chapter identifies three points of comparison between each project: (1) the nature of the project, (2) the terms of the EA review, and (3) whether GHGs were considered.

Chapter three concludes by noting that there was an uneven consideration of GHGs in the EA process of these projects and that there was an absence of formal requirements for considering GHGs in the CEAA 2012.

### **3.2 Legislative Framework Before the Impact Assessment Act and the Canadian Energy Regulator Act**

The IAA<sup>5</sup> and the *Canadian Energy Regulator Act* (CERA)<sup>6</sup> came into force in 2019. However, the majority of the EA of energy projects that will be examined in this chapter was in the era of previous legal regimes. This chapter will examine NEBA and the CEAA 2012.

#### **3.2.1 CEAA 2012**

The CEAA 2012 replaced the CEAA 1995.<sup>7</sup> The CEAA 2012, was established to provide a legislative framework for environmental assessment in Canada subject to federal jurisdiction.<sup>8</sup> Thus, the CEAA 2012 sought to protect the environment from significant adverse environmental

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<sup>5</sup> “A proposed new impact assessment system” (last visited 18 September 2019), online: *Government of Canada* < <https://www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews/environmental-assessment-processes.html>>.

<sup>6</sup> *Ibid.*

<sup>7</sup> Penny Becklumb & Tim Williams, "Canada's New Federal Environmental Assessment Process" (28 August 2012), online: *Parliament of Canada* < [https://bdp.parl.ca/sites/PublicWebsite/default/en\\_CA/ResearchPublications/201236E](https://bdp.parl.ca/sites/PublicWebsite/default/en_CA/ResearchPublications/201236E)>.

<sup>8</sup> Impact Assessment Agency of Canada, “Basics of Environmental Assessments” (last visited 18 September 2019), online: *Government of Canada* < <https://www.canada.ca/en/impact-assessment-agency/services/environmental-assessments/basics-environmental-assessment.html#ceaa01>>.

effects of a proposed project.<sup>9</sup> Under the CEAA 2012, the designated projects were provided under section 2, and they included projects that were carried out within the federal jurisdiction.<sup>10</sup>

The definition of the environment under the CEAA covered all layers of the atmospheric climate, which means that atmospheric pollution could have been considered in the scope of the environment and, therefore, included in the assessment.<sup>11</sup> The assessment of a project under the CEAA 2012 was based on the projects outlined in the *Regulations Designating Physical Activities* for EA pursuant to section 52 of the CEAA.<sup>12</sup> However, any project that was excluded from the regulation was to undergo an EA if a CEAA official made a designation request to the Minister of Environment (the Minister).<sup>13</sup> Thus, leaving out several projects likely to emit GHGs from EA.<sup>14</sup> The Minister had an important role to play in the assessment process of a designated project. Some of the functions of the Minister included rejecting an assessment, and after the assessment, determining whether a project was to be approved based on whether the proposed project could have a significant adverse effect on the environment.<sup>15</sup>

### 3.2.2 Canadian EA Legislation and Jurisprudence Relating to GHGs

EA is necessary for the process of approving energy projects because it aids in “predicting problems, to find ways to avoid them, and to enhance positive effects.”<sup>16</sup> As John Swaigen argues, the purpose of EA is twofold:<sup>17</sup>

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<sup>9</sup> *Ibid.*

<sup>10</sup> Canadian Environmental Assessment Act, SC 2012 at s. 2.

<sup>11</sup> *Ibid.*

<sup>12</sup> *Ibid* at s. 52.

<sup>13</sup> Meinhard Doelle, “Integrating climate change into EA: Thoughts on federal law reform” (18 October 2016), online (blog): *Dalhousie University blogs* <<https://blogs.dal.ca/melaw/2016/10/18/integratingclimate-change-into-ea-thoughts-on-federal-law-reform/>>.

<sup>14</sup> *Ibid.*

<sup>15</sup> CEAA 2012, supra note 10 at s 10.

<sup>16</sup> “The need for environmental assessment” (last visited April 24 2019), online: *FAO* <<http://www.fao.org/3/V8350E/v8350e04.htm>>.

<sup>17</sup> John Swaigen, *Environmental Rights in Canada* (Toronto: Buttersworth, 1981) at 247.

The first purpose for “early identification and evaluation of all potential environmental consequences of a proposed undertaking” and second, “decision-making that both guarantees the adequacy of this process and reconciles, to the greatest extent possible, the proponent’s development desires with environmental protection and preservation.”<sup>18</sup>

By this measure, EAs in Canada have had high and low points.<sup>19</sup> According to Boyd, the high point is the Mackenzie Valley Pipeline Inquiry conducted by Justice Thomas Berger in the mid-1970s, which saw the termination of the project because the project would have caused irreparable environmental harm.<sup>20</sup> The low point of EA in Canada was argued to be the Mulroney Government’s decision to exempt Alcan’s controversial Kemano Completion Project from EA.<sup>21</sup>

The CEAA 2012 was repealed in 2019, and it is important to understand the CEAA 2012’s requirements to consider GHG emissions in EA and the transition to the IAA. The provisions of the CEAA 2012 could be read to acknowledge the GHG impacts of the environment. Section 2 defined the environment to include land, water, and air. The air aspect of the environment covers all layers of the atmospheric environment.<sup>22</sup> It suffices to say that GHG emissions are included in this definition of the environment as they constitute atmospheric pollution, and would have been useful consideration during any assessment process.

In fact, one can argue that GHG emissions should have been considered in the assessment process of Canadian energy projects under CEAA 2012. For one, the courts supported this viewpoint. For instance, in the case of *Syncrude Canada Ltd v Canada (Attorney General)*, the

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<sup>18</sup> *Ibid.*

<sup>19</sup> David Boyd, *Unnatural Law: Rethinking Canadian Environmental Law and Policy*, (Vancouver: UBC Press, 2003) at 150.

<sup>20</sup> *Ibid.*

<sup>21</sup> *David Boyd, supra* note 19 at 151.

<sup>22</sup> *CEAA 2012, supra* note 10 at s.2.



court encouraged its use, when it upheld federal jurisdiction to regulate GHGs.<sup>23</sup> Also, CEAA 2012 emphasized the precautionary principle by mandating that the designated project should be “considered in a careful and precautionary manner to avoid significant adverse environmental effects.”<sup>24</sup> Chalifour commented on this principle stating that regulators should be careful with scientific uncertainty, and they cannot discard GHG considerations merely because one cannot demonstrate environmental consequences from a project’s GHG emissions.<sup>25</sup>

### 3.2.3 National Energy Board Act (NEB)

The NEB<sup>26</sup> was established in 1959 as an independent federal regulator. The NEB had quasi-judicial powers with a status similar to a superior court due to the powers granted to it by Parliament.<sup>27</sup> The NEB had the responsibility to conduct EAs, which stemmed from legislation directing it to conduct a review of the environmental effects of projects.<sup>28</sup> The NEB received applications by proponents seeking approval for energy projects, then conducted an EA, which involved hearings and submissions according to section 52 of the NEBA.<sup>29</sup> The NEB then prepared its report, which was then submitted to the Minister to make a final decision on the project.<sup>30</sup> The report by the NEB was a recommendation setting out whether the project should go forward based on several factors, including the environmental effects of the project.<sup>31</sup> The NEB’s report and

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<sup>23</sup> 2014 FC 776, 244 ACWS (3d) 328; *Mark Friedman*, *supra* note 23 at 6.

<sup>24</sup> *CEAA*, *supra* note 10 at s.4; *Mark Friedman*, *supra* note 23 at 8.

<sup>25</sup> Nathalie Chalifour, “The Significance of *Pembina Institute for Appropriate Development et al v Canada [Attorney-General]* for the Future of Environmental Assessment,” (2009) 5 McGill Int’l J Sust Dev L & Pol’y 251 at 273; *Mark Friedman*, *supra* note 23 at 8.

<sup>26</sup> *National Energy Board Act*, RSC 1985, c. N-7.

<sup>27</sup> Canadian Energy Regulator, “National Energy Board-Fact Sheet” (last visited 19 September 2019), online: *Government of Canada* < <https://www.cer-rec.gc.ca/bts/whwr/nbfctsh-eng.html> >.

<sup>28</sup> Canadian Energy Regulator, “FAQs on Environmental Assessment” (last visited 19 September 2019), online: *Government of Canada* < <https://www.cer-rec.gc.ca/bts/nws/fqs/nvsssmntfq-eng.html> >.

<sup>29</sup> *National Energy Board Act*, *supra* note 26 at s. 52.

<sup>30</sup> Canada Energy Regulator, “National Energy Board Hearing Process Handbook” (last visited 11 April 2020), online: *Government of Canada* < <https://www.cer-rec.gc.ca/prcptn/hrng/hndbk/index-eng.html> >.

<sup>31</sup> *Ibid.*

recommendation did not approve the projects; the report merely offered a recommendation for approval, possibly with recommended conditions.<sup>32</sup>

### **3.3 Legislative Framework in the Former EA Process**

#### **3.3.1 Process Options to Undergo a Federal Environmental Assessment under CEAA 2012**

Under the CEAA 2012, there were two ways a designated project qualified for a federal environmental assessment process. The first was if the designated project was listed in the then *Regulations Designating Physical Activities*, or if the project was designated for assessment by an order by the Minister of Environment.<sup>33</sup>

A designated project under the CEAA 2012 *Regulations Designating Physical Activities* project list would have undergone assessment if the project was likely to have had significant adverse environmental effects.<sup>34</sup>

If a designated project was not listed in the project list, then the Minister had the prerogative to make an order to designate such a project for environmental assessment, provided the Minister was of the opinion that the project could cause significant adverse environmental effects.<sup>35</sup>

#### **3.3.2 Standard EA Process**

There were two levels of assessment under the CEAA 2012. They were the standard environmental assessment and the panel review.

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<sup>32</sup> *Ibid.*

<sup>33</sup> Penny Becklumb & Tim Williams, *supra* note 7.

<sup>34</sup> *Ibid*; *Regulations Designating Physical Activities*, SOR/2012-147

<sup>35</sup> *CEAA 2012*, *supra* note 10 at s. 14(5).

The primary mode of EA under the CEAA 2012 was the standard environmental assessment process, which was carried out by the responsible authority, which was the Canadian Environmental Assessment Agency.<sup>36</sup> One exception to the rule was when the designated project was regulated under the *Nuclear Safety and Control Act*; then, the responsible authority was the Canadian Nuclear Safety Commission (CNSC). Another was when the designated project was under the NEBA or the *Canada Oil and Gas Operations Act*; then, the responsible authority was the NEB.<sup>37</sup>

In conducting the assessment of the designated project, the responsible authority was to take into consideration several factors including, the purpose of the designated project, the environmental effects from the designated project, the significance of the designated project, mitigation measures, alternative means of carrying out the designated project, and public perception and public interest.<sup>38</sup> The timeline for the responsible authority to carry out the EA was within 365 days.<sup>39</sup>

Under the CEAA 2012 standard EA process, there were certain measures taken to avoid duplicity of the EA process. The first was for the responsible authority to delegate the power to carry out the EA of a designated project to another jurisdiction. The Minister was also permitted to approve a substitution process. The substitution occurred when a provincial government requested that the EA process for a designated project be substituted for the federal process, and the provincial government was to meet several conditions.<sup>40</sup> If the Minister believed that a provincial EA process would be more suited for the EA process of a designated project, the Minister could authorize a

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<sup>36</sup> Penny Becklumb & Tim Williams, *supra* note 7.

<sup>37</sup> CEAA 2012, *supra* note 10 at s. 15.

<sup>38</sup> *Ibid* at s. 15.

<sup>39</sup> *Ibid* at s. 27(2).

<sup>40</sup> *Ibid* at s. 34.

substitution provided certain conditions are met, and both the provincial laws and federal laws were equivalent in standard and process.<sup>41</sup>

### **3.3.3 Review Panel**

The second level of EA is a review panel, and the Minister triggered it once the Minister referred the EA of a designated project to a review panel.<sup>42</sup> The Minister usually referred an EA to a review panel if the Minister believes that doing so was in the public interest while considering several factors like whether the designated project may cause significant adverse effects and public concerns related to those effects.<sup>43</sup>

#### **3.3.3.1 Joint Review Panel**

A joint review panel is a panel comprising of the federal and provincial governments responsible for conducting an EA for a project that is in the federal and provincial jurisdiction.<sup>44</sup>

Under the CEAA, a joint review panel was necessary when a designated project was within both federal and provincial or territorial jurisdiction. Thus, the joint review panel was established to avoid duplication and to ensure a “one project-one review.”<sup>45</sup> Before the joint review panel was set up, there was a joint review panel agreement negotiated between the federal government and the other provincial/territorial governments in question.<sup>46</sup> The agreement highlighted the extent of the review process and the terms of reference for the joint review panel.<sup>47</sup>

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<sup>41</sup> *Ibid* at s. 37

<sup>42</sup> *Ibid* at s. 38–51

<sup>43</sup> *Ibid* at s. 52.

<sup>44</sup> Canadian Environmental Assessment Agency, “Practitioners Glossary for the Environmental Assessment of Designated Projects Under the Canadian Environmental Assessment Act, 2012” (last visited 18 September 2019), online: CEAA < <https://www.ceaa-acee.gc.ca/default.asp?lang=en&n=E7F0FC59-1&offset=3&toc=hide>>.

<sup>45</sup> *Impact Assessment Agency*, *supra* note 8.

<sup>46</sup> *Canadian Environmental Assessment Agency*, *supra* note 44.

<sup>47</sup> *Ibid*.

### 3.3.4 Decision Making

After the EA of the designated project, the decision making power of whether the designated project was to be approved was by the Minister after taking into consideration several factors like whether the designated project was likely to cause significant adverse environmental effects, and the various mitigation measures.<sup>48</sup>

## 3.4 GHG Guidance in the Former EA process

### 3.4.1 2003 Guidance on Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners

The primary purpose of the guidance was to provide practitioners for the government and proponents of the projects with direction on how GHGs could be implemented in an EA process.<sup>49</sup> The guidance provided practitioners with the requisite understanding of climate change implications in an EA process.<sup>50</sup> Also, practitioners were guided into understanding when a project required GHGs to be considered in the EA process, and the necessary sources of information practitioners could use in assessing climate change implications of a designated project.<sup>51</sup>

However, the guide did not have a legally binding force, and its status was merely discretionary.<sup>52</sup> Thus, leaving room for unenforceability, but one can submit that this guidance was a step in the right direction, leaving room for future amendments, which might make similar guidance legally enforceable.<sup>53</sup>

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<sup>48</sup> Penny Becklumb & Tim Williams, *supra* note 7.

<sup>49</sup> Impact Assessment Agency of Canada, “Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners” (last visited 18 September 2019), online: *Government of Canada* <<https://www.ceaa.gc.ca/default.asp?lang=En&n=A41F45C5-1&offset=3&toc=hide&pedisable=true>>.

<sup>50</sup> *Ibid.*

<sup>51</sup> *Ibid.*

<sup>52</sup> *Ibid.*

<sup>53</sup> *Ibid.*

### 3.4.2 NEB Handbook/ Guidelines

When an energy project or infrastructure was being proposed, the NEB had the responsibility to provide a recommendation to the federal government or Governor in Council on whether such a project should be granted permission for construction.<sup>54</sup> To decide on the approval of an energy project, the NEB held public hearings for the project proponents, persons affected by the project and experts to present their views on the project.<sup>55</sup> The views from these parties aided the NEB to arrive at a decision, and the decision was recommended to the federal government or Governor in Council for approval of such a project.<sup>56</sup>

The NEB held hearings for energy projects seeking approval for the construction and operation of major international or interprovincial pipelines, abandonment of pipelines, and construction of international power lines.<sup>57</sup> The NEB hearings were held by writing or oral means.<sup>58</sup>

Once the hearing commenced, the NEB considered information and data available to it to make a decision.<sup>59</sup> The NEB considered how the project would affect the environment and public interest.<sup>60</sup> During the NEB hearings, the NEB considered several environmental matters relating to the project terms of reference, which may have included how the project contributed to GHGs.

### 3.4.3 Interim Measures of Pipeline Reviews

In 2016, following the federal election, the government introduced interim measures for pipeline reviews, declaring that they amount to a first step in reviewing current practices and

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<sup>54</sup> Canada Energy Regulator, “National Energy Board Hearing Process Handbook” (last visited 13 April 2020) at 1, online (pdf): *Canada Energy Regulator* < <https://www.cer-rec.gc.ca/prtceptn/hrng/hndbk/pblchrngpmpht-eng.pdf> >.

<sup>55</sup> *Ibid.*

<sup>56</sup> *Ibid.*

<sup>57</sup> *Ibid* at 2.

<sup>58</sup> *Ibid.*

<sup>59</sup> *Ibid* at 3.

<sup>60</sup> *Ibid.*

restoring public confidence in the Canadian environmental assessment process.<sup>61</sup> The government claimed public confidence was lost for several reasons including that there was no clear or right purpose of EA in that EA should take into consideration environmental social, economic, and cultural impacts;<sup>62</sup> also there was a perception that EA was more in support of project proponents and government interest than the environment;<sup>63</sup> also there was a concern that the EA structure was bias and there was a lack of transparency within the EA process which sometimes resulted in the inconsistent standard.<sup>64</sup>

In response to the loss of confidence, the government introduced the interim measures. The measures consisted of five principles that were to guide decision making on specific energy projects, including the Energy East Project and the Trans Mountain Expansion Project.<sup>65</sup> Concerning GHGs, the interim measures mandated assessing upstream GHG emissions associated with the specified projects, and the information gathered were to be made public.<sup>66</sup>

### **3.4.4 GHG Considerations in Energy Projects and Project Terms of Reference**

The following examples illustrate that the assessment of GHGs in federal EAs of energy projects was inconsistent under the previous regimes.

#### **3.4.4.1 Northern Gateway Project**

One of the matters considered in the environmental assessment of the Northern Gateway Project proposed by Enbridge was how the proposed project would affect the GHG emissions. The

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<sup>61</sup> “Interim Measures for Pipeline Reviews” (last visited 18 September 2019), online: *Government of Canada* <<https://www.canada.ca/en/natural-resources-canada/news/2016/01/interim-measures-for-pipeline-reviews.html>>.

<sup>62</sup> Arlene Kwasniak “Federal Environmental Assessment Re-Envisioned to Regain Public Trust – The Expert Panel Report” (12 April, 2017), online: ABlawg, [https://ablawg.ca/wp-content/uploads/2017/04/Blog\\_AK\\_CEEA\\_Panel\\_Report.pdf](https://ablawg.ca/wp-content/uploads/2017/04/Blog_AK_CEEA_Panel_Report.pdf)

<sup>63</sup> *Ibid.*

<sup>64</sup> *Ibid.*

<sup>65</sup> *Interim Measures for Pipeline Reviews, supra* note 61.

<sup>66</sup> *Ibid.*

project was intended to run two pipelines between Bruderheim, Alberta, and Kitimat, British Columbia.<sup>67</sup> A joint review panel was established by the Minister of Environment and the Chair of the NEB to assess its environmental effects. The ultimate goal of the joint review panel was to recommend whether the project should go forward.<sup>68</sup> Although the review panel recommended that the project should proceed for approval, the Federal Court of Appeal overturned the NEB's recommendation for approval because there was a breach of the duty to consult.<sup>69</sup> Then, the government at that time decided to discontinue the project.<sup>70</sup> However, the project is essential for understanding how GHGs has been considered in energy projects in Canada.

The Northern Gateway Pipeline was expected to transport several products, including condensate, diluted bitumen, synthetic crude oil, and other petroleum products.<sup>71</sup> The proposal identified in detail the capacity of the proposed pipelines and other ancillary infrastructure associated with the establishments of the pipeline.<sup>72</sup> The westbound pipeline was proposed to carry an average of 83,400 cubic metres or 525,000 barrels of oil products from Bruderheim to Kitimat per day.<sup>73</sup> While the eastern pipeline was to transport an average of 30,700 cubic metres or 193,000 barrels of condensate per day from Kitimat to the inland terminal at Bruderheim.<sup>74</sup> Thus, based on the product being transported, there is a specific increase in GHG emissions from the project from both upstream and downstream.

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<sup>67</sup> National Energy Board, "Connections Report of the Joint Review Panel for the Enbridge Northern Gateway Project volume 1" (2013) at 2, online (pdf): *Government of Canada* <[http://publications.gc.ca/collections/collection\\_2014/one-neb/NE23-176-2013-1-eng.pdf](http://publications.gc.ca/collections/collection_2014/one-neb/NE23-176-2013-1-eng.pdf)>; The School of Public Policy, "Greenhouse Gas Emissions and Northern Gateway" (20 September 2012), online (blog): *The School of Public Policy* <<https://www.policyschool.ca/greehouse-gas-emissions-and-northern-gateway/>>.

<sup>68</sup> *National Energy Board*, *supra* note 67 at 2.

<sup>69</sup> Jason proctor, "Northern Gateway pipeline approval overturned", *CBC News* (30 June 2016) <<https://www.cbc.ca/news/canada/british-columbia/northern-gateway-pipeline-federal-court-of-appeal-1.3659561>>.

<sup>70</sup> *Ibid.*

<sup>71</sup> *National Energy Board*, *supra* note 67 at 7.

<sup>72</sup> *Ibid* at 3-4.

<sup>73</sup> *Ibid*

<sup>74</sup> *Ibid*



The joint review panel was set up to assess the environmental effects from the Northern Gateway Project's construction, production activities and operations.<sup>75</sup> One of the factors considered by the panel was the cumulative environmental effects from the project and the mitigation measures considered to address this.<sup>76</sup> The jurisdiction of the panel was limited to the scope of the enabling legislation like the CEAA 2012 and the NEBA but particularly the joint review panel agreement.<sup>77</sup>

During the activities of the joint review panel, they heard submissions from experts, indigenous people, interested parties, and the public at large on the environmental effects of the project.

The mandate of the panel on the assessments of GHGs was restricted to the joint review panel agreement, and it did not include the upstream oil development effects and downstream effects from refining and use of the products that would have been transported.<sup>78</sup> The panel in their submissions stated that they received several concerns about the increased GHGs from the project from oil sands development.<sup>79</sup> The panel concluded:

We did not consider that there was a sufficiently direct connection between the project and any particular existing or proposed oil sands development or other oil production activities to warrant consideration of the effects of these activities. We based our decision on four factors: Provincial and federal energy and environmental authorities already regulate oil sands development and other oil production activities; Northern Gateway applied only for a transportation project and did not

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<sup>75</sup> *Ibid* at 8.

<sup>76</sup> *Ibid.*

<sup>77</sup> *Ibid.*

<sup>78</sup> *Ibid.*

<sup>79</sup> *Ibid.*

indicate any intention to develop oil sands or other oil production; The Bruderheim Station would not be located near oil sands developments and could receive oil from a variety of sources; and Oil sands projects and activities were not included in our terms of reference under the Joint Review Panel Agreement.<sup>80</sup>

Thus, the panel did not have the jurisdiction to consider these effects and also, the project did not directly relate to any oil sand development as it provided a means for transporting oil produce.<sup>81</sup> Also, on the matter of downstream emissions from “upgrading, refining, and diluted bitumen use in China and elsewhere,” the panel argued that such a review was outside their jurisdiction.<sup>82</sup>

#### **3.4.4.2 The Kearl Oil Sands and Jackpine Mine Expansion Project**

The two projects to be considered are the Kearl Oil Sands<sup>83</sup> and Jackpine Mine Expansion Project;<sup>84</sup> these projects are oil sands projects, but the projects are mentioned because although they are not pipelines, they are comparable energy projects by contributing GHGs to the atmosphere. More importantly, the Kearl Oil Sands Project was litigated, and one of the major points of contention was to determine to what extent GHGs was considered in the assessment process. On the other hand, the Jackpine case did not have any litigation arising from the assessment of GHGs because GHGs was considered in the assessment process. The Kearl Oil Sands and Jackpine Projects are discussed because both projects represent the inconsistency of the assessment of GHGs in the CEAA era.

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<sup>80</sup> *Ibid* at 17.

<sup>81</sup> *Ibid*.

<sup>82</sup> *Ibid*.

<sup>83</sup> Pembina Institute, “Imperial Kearl Oil Sands Mine Hearings” (11 January 2008) at 1, online (pdf): *Pembina Institute* < <https://www.pembina.org/reports/OS-Kearl-backgrounder.pdf>>.

<sup>84</sup> Martin Olszynski, “Shell Jackpine JRP Report: Would the Real “Adaptive Management” Please Stand Up?”, (31 July, 2013) online: Ablawg < <http://ablawg.ca/2013/07/31/shell-jackpine-jrp-report-would-the-real-adaptive-management-please-stand-up/>>.

Another reason for analyzing these projects is because the assessment of the two projects was by a joint review panel of the province and the federal government, and one of the matters that was discussed was the impact of the project on the GHG emissions of Canada. Although the majority of oil sands development falls under the provincial jurisdiction of conservation and management of non-renewable natural resources,<sup>85</sup> the federal government has jurisdiction over trade and commerce that extends beyond Canadian borders.<sup>86</sup> Thus, when oil sands and bitumen are sold nationally or internationally, it falls under federal jurisdiction.<sup>87</sup> Also, when oil sands are sold by pipelines or rail to marine terminals for international sales beyond North America, the federal government has jurisdiction.<sup>88</sup> Accordingly, there are scenarios where there are joint panels of the federal government and the provincial governments conducting EA on the projects.

The Kearl Project is an oil sands mine and processing facility in the Athabasca Oil Sands region at the Kearl Lake area north of Fort McMurray in Alberta.<sup>89</sup> Its proposal stipulated a capacity of 300,000 barrels per day of bitumen for 50 years with a landmass covering 20,000 hectares of land in northeast Alberta.<sup>90</sup> The environmental assessment of the project was jointly carried out by the federal and Alberta governments.<sup>91</sup> An agreement to establish a joint panel for the project was constituted on July 13, 2006.<sup>92</sup> The report and recommendations of the panel were published the following year on February 27, 2007, and the report stipulated that the project was not likely to

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<sup>85</sup> *Constitution Act 1867*, s 92 (A).

<sup>86</sup> *Ibid* at s. 91 (2). See also Alastair Lucas & Diego Almeida, “Environmental Education for Court Practitioners-Regulation and Enforcement of Oil Sands GHG Emissions” (25 October 2018) at 3, online (pdf): CIRL <<https://cirl.ca/files/cirl/regulation-and-enforcement-of-oil-sands-ghg-emissions-2.pdf>>.

<sup>87</sup> *Alastair Lucas & Diego Almeida*, *supra* note 86 at 3.

<sup>88</sup> *Constitution Act 1867*, *supra* note 85 at s 92 (10) (a); *Alastair Lucas & Diego Almeida*, *supra* note 86 at 3.

<sup>89</sup> Pembina Institute, *supra* note 83.

<sup>90</sup> *Ibid*.

<sup>91</sup> *Ibid*.

<sup>92</sup> *Ibid*.

cause significant adverse environmental effects provided the panels proposed mitigation measures and recommendations are implemented.<sup>93</sup>

In the Kearl Project, the joint review panel addressed the issue of GHG emissions and supported Alberta's decision on developing a GHG regulatory framework, which was the proposed *Specified Gas Emitters Regulation*.<sup>94</sup> The framework was a direction on how Alberta would address GHGs from large emitters. Also, Alberta sought to develop EPEA approval requirements that would have mandated Imperial oil to reach a GHG intensity target of 40 kilograms (kg) of carbon dioxide equivalent (CO<sub>2</sub>e) per barrel.<sup>95</sup>

However, the decision of the joint review panel was appealed to the Federal Court in 2008 by the Pembina Institute in the case of *Pembina Institute v Canada (Attorney General)*.<sup>96</sup> The decision of the Federal Court in the case was to set the decision of the review panel aside because the review panel failed to give convincing reasons for concluding that the GHGs from the project would be insignificant.<sup>97</sup> The argument was that since the project did not have a significant adverse effect, there was no need to justify outweighing the benefit from the project over the harm.<sup>98</sup> However, Pembina argued that there was no way “without successful mitigation,” the Kearl Project would not harm the environment, especially considering the time frame for the existence of the project, which is 50 years.<sup>99</sup> The argument by Pembina is tenable because there were convincing

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<sup>93</sup> *Ibid.*

<sup>94</sup> Canadian Environmental Assessment Agency and Alberta Energy and Utilities Board[now AER], Kearl Oil Sands Project Joint Review Panel, EUB Decision 2007-013 Imperial Oil Resources Ventures Limited, Application for an Oil Sands Mine and Bitumen Processing Facility(Kearl Oil Sands Project) in the Fort McMurray Area, 27 February, 2007 at 58. [Kearl Report] < <https://www.aer.ca/documents/decisions/2007/2007-013.pdf>>; *Alastair Lucas & Diego Almeida, supra* note 86 at 6.

<sup>95</sup> *Alastair Lucas & Diego Almeida, supra* note 86 at 6.

<sup>96</sup> *Pembina Institute for Appropriate Development v. Canada (Attorney General)*, 2008 FC 302.

<sup>97</sup> Mark Friedman, “Assessing Greenhouse Gas Emissions in the Oil Sands: Legislative or Administrative (in)Action?” (2016) 6:3 *Western Journal of Legal Studies* 9 < <https://ir.lib.uwo.ca/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1193&context=uwoils>>.

<sup>98</sup> *Ibid.*

<sup>99</sup> *Pembina Institute, supra* note 83 at 2.

reasons to believe that a 50 years-oil sand mine project covering 20,000 hectares of land would cause an adverse effect on the environment. Pembina argued further that GHGs from the Kearnl Project would contribute to climate change as emissions on the average from the project would be 3.7 million tonnes of carbon dioxide per year.<sup>100</sup>

Thus, the court ordered them to review their decision, and the panel reviewed the GHGs issues and came to the conclusion that the project would not cause an adverse environmental effect.<sup>101</sup> On this premise, the federal government approved the project.<sup>102</sup>

The Jackpine Mine Expansion Project came after CEAA 2012. The project considered GHGs in its assessment. The project was by Shell, and it was aimed at expanding the existing Jackpine Mine near Fort McMurray.<sup>103</sup> The expansion would increase the capacity to 47,700 m<sup>3</sup>/day.<sup>104</sup> Subsequently, a joint review panel was established to conduct the environmental assessment of the project.<sup>105</sup>

In the assessment process, Shell acknowledged that the Jackpine Project would have direct and indirect emissions and that the project would add significantly to the GHG emissions by contributing “approximately 1.2 million tonnes of GHG emissions in CO<sub>2</sub> equivalent per year (Mt CO<sub>2</sub>e/yr)”<sup>106</sup> but Shell provided several mitigation measures.<sup>107</sup> On the mitigation measures to be adopted, Shell stated that it would take steps to be a leading company in CO<sub>2</sub> mitigation. It promised to address direct emissions from facilities; add CO<sub>2</sub> cost in its growth projection; improve

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<sup>100</sup> *Ibid.*

<sup>101</sup> Kearnl Report, Addendum to EUB Decision 2007-113, Additional rationale for the joint review panel’s conclusions on air emissions, 2018.

<sup>102</sup> *Alastair Lucas & Diego Almeida, supra* note 86 at 7.

<sup>103</sup> *Martin Olszynski, supra* note 84.

<sup>104</sup> *Ibid.*

<sup>105</sup> *Ibid.*

<sup>106</sup> Canadian Environmental Assessment Agency, “Report of the Joint Review Panel Shell Canada Energy Jackpine Mine Expansion Project” (2013) at 49, online (pdf): CEAA <<https://www.ceaa.gc.ca/050/documents/p59540/90873E.pdf>>.

<sup>107</sup> *Ibid.*

energy efficiency, and meet the Quality Urban Energy Systems of Tomorrow (QUEST) carbon capture and storage project.<sup>108</sup>

The panel found that Shell was taking steps to mitigate the environmental effects by investing in energy-efficient projects and low carbon energy sources.<sup>109</sup> The panel also acknowledged Shell's plan to undertake QUEST carbon and storage, which was expected to capture about one million tonnes of carbon dioxide each year from 2015.<sup>110</sup> Also, in the panel findings, they urged Shell to take steps to reduce GHGs by taking additional measures elsewhere.

Thus, the joint review panel concluded that the project would likely cause significant adverse environmental effects but should be approved on the premise of it being in the public interest.<sup>111</sup>

There are some points that are not clear about Shell's mitigation plans and also the panel findings. First of all, Shell was ambiguous in its ambition to be a leading company in carbon dioxide mitigation. Although this is a laudable ambition, however, better clarity and framework to attain such goals would have given better certainty to the mitigation plans.

Also, in relation to Shell's plan to undertake the QUEST carbon capture and storage facility, one can argue that this is a laudable plan, but several questions need to be asked. For instance, how much of the projects CO<sub>2</sub> emissions "would be offset by the province-wide facility?"<sup>112</sup>

Also, the panel was unclear as to what it meant by mandating Shell to reduce GHGs from the project by implementing additional measures elsewhere. Although it is laudable for Shell to seek to take steps to mitigate the GHG emissions and as the panel rightfully stated that the project

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<sup>108</sup> *Ibid.*

<sup>109</sup> *Ibid.*

<sup>110</sup> *Ibid.*

<sup>111</sup> *Ibid.*

<sup>112</sup> *Mark Friedman, supra* note 97 at 12-13.

meets GHGs regulatory standards if Shell meets the measures it stated, but one can argue that the panel could have been more specific in mandating Shell to reduce GHGs elsewhere. The reason for the ambiguity is because there are no specific laws that state how GHGs will be considered in the assessment process, leaving room for ambiguity and several interpretations

Furthermore, the panel opined that if Shell was able to meet the mitigation measures it proposed, then the project would not pose an adverse effect.<sup>113</sup> The submission by the panel poses several challenges because there are questions unanswered like what if Shell fails in any of its mitigation measures, then what is the recourse to the environment when the project has been built, and it is entirely in operation?

The inconsistent decision to assess GHGs in Kearl and Jackpine Projects was likely a consequence of an absence of formal legislative enactments on GHGs in the CEAA 2012. In the Kearl Project, the assessment agency initially decided not to assess GHGs in the project until it was challenged in court, and the court directed it to assess GHGs.<sup>114</sup> The decision not to assess GHGs initially was as a result of the assessment agency not being required under law to do so. Although it later did assess GHGs from the project, the project was approved based on the project being in the public interest. By comparison, in the Jackpine Project, the proponents submitted a GHG assessment, and the assessment agency considered GHGs in the EA. The seemingly different approach by the assessment agency is the exercise of discretion, which was a result of the absence of a formal legislative requirement mandating the assessment agency to consider GHGs.

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<sup>113</sup> *Ibid.*

<sup>114</sup> *Ibid.*

### 3.4.4.3 Frontier Project

The Frontier Project is more recent than the Kearl and Jackpine Projects, and this project is essential in the discussion of GHGs because GHGs was considered in its assessment. The Frontier Project is a proposed truck-and-shovel oil sands mine located in northeast Alberta.<sup>115</sup> It consists of “surface mining operations, a processing plant, tailings management facilities, water management facilities, and associated infrastructure and support facilities.”<sup>116</sup> A joint federal-provincial review panel was responsible for the regulatory review process.<sup>117</sup> Teck Resources Limited was responsible for the project and stated that it seeks to manage the GHGs effectively by incorporating best practices.<sup>118</sup>

EcoJustice representing the Oil Sands Environmental Coalition (“OSEC”) submitted its opinion on the Frontier Project to the joint review panel for filing.<sup>119</sup> In the opinion, Mr. Gorski, as part of the submission presented by EcoJustice on the project, argued that indirect emissions should be considered when determining the climate impacts of the project.<sup>120</sup> He argued further that Teck’s estimation of GHG emissions from the project did not account for upstream emissions from onsite natural gas and diesel production and GHGs from land-use changes.<sup>121</sup> He also argued among other reasons that GHG emissions from the project are inconsistent with Canadian GHG reduction targets.<sup>122</sup>

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<sup>115</sup> Teck, “Frontier Project” (last visited 19 September 2019), online: *TECK* < <https://www.teck.com/operations/canada/projects/frontier-project/frontier-project>>.

<sup>116</sup> Teck, “Profiling the Frontier Project” (last visited 21 July 2020), online: *TECK* < <https://www.teck.com/news/connect/issue/volume-23,-2018/table-of-contents/profiling-the-frontier-project> >.

<sup>117</sup> *Teck*, *supra* note 115.

<sup>118</sup> *Ibid.*

<sup>119</sup> EcoJustice, “Frontier Oil Sands Mine Project” (31 August 2018) at 18-19, online (pdf): *CEAA* < <https://www.ceaa-acee.gc.ca/050/documents/p65505/125100E.pdf>>.

<sup>120</sup> *Ibid.*

<sup>121</sup> *Ibid.*

<sup>122</sup> *EcoJustice*, *supra* note 119 at 20.



Teck resources “considered climate change in the methodology and modelling used for the environmental assessment.”<sup>123</sup> Teck designed mitigation measures based on climate modelling it adopted; also, Teck considered the effects of climate change on the project. The panel in their findings concluded that Teck resources used several climate change models to assess the project and its effects on the climate.<sup>124</sup> Teck considered the effect the project would have on future climate change. It also incorporated climate change consideration to the cumulative effects of the project. The panel concluded that Teck took steps to highlight adaptive and mitigation measures to the climate effects of the project.<sup>125</sup>

The Frontier Project demonstrates the trend of considering GHGs in the proposal of a proposed project and the consideration of GHGs in the assessment process in the era of CEAA.

#### **3.4.4.4 Energy East Pipeline**

The Energy East Pipeline was an ambitious project projected to have a capacity to carry 1.1 million barrels of crude oil per day.<sup>126</sup> The projected route of the pipeline was meant to be from Alberta to New Brunswick with a length of 4,500-kilometres, and the pipeline was intended to transport about 1.1 million barrels of crude oil per day.<sup>127</sup> It was projected to generate 32 million tonnes of GHG emissions each year.<sup>128</sup> If it had been built, the Energy East Pipeline would have been the longest pipeline in Canada.<sup>129</sup> The pipeline was to carry oil from "Alberta, Saskatchewan,

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<sup>123</sup> Canadian Environmental Assessment Agency, “Report of the Joint Review Panel Teck Resources Limited Frontier Oil Sands Mine Project” (25 July 2019) at 175-177, online (pdf): CEAA < <https://ceaa-acee.gc.ca/050/documents/p65505/131106E.pdf>>.

<sup>124</sup> *Ibid.*

<sup>125</sup> *Ibid.*

<sup>126</sup> National Energy Board, “Energy East and Eastern Mainline Projects” (last visited 13 August 2019), online: *Government of Canada* < <http://www.neb-one.gc.ca/pplctnflng/mjrpp/nrgyst/index-eng.html>>; Warren Mabee, “What really sank the Energy East pipeline?” (20 October 2017), online: *Canada’s National Observer* < <https://www.nationalobserver.com/2017/10/20/analysis/what-really-sank-energy-east-pipeline>>.

<sup>127</sup> *National Energy Board, supra* note 126.

<sup>128</sup> Pembina Institute, “Energy East: new report assesses pipeline’s climate impact” (4 February 2020), online: *Pembina Institute* <<https://www.pembina.org/media-release/2520>>.

<sup>129</sup> *National Energy Board, supra* note 126.

Manitoba, Ontario, Québec and New Brunswick to link up with the converted pipe; and Constructing the associated facilities, pump stations and tank terminals required to move crude oil across the country to marine facilities that enable access to other markets by ship.”<sup>130</sup> Thus, because the project was an inter-provincial pipeline, the NEB had the jurisdiction to conduct the EA and thus, it set up a review panel to carry out this function to assess the environmental effects of the project.<sup>131</sup>

The NEB, under Appendix 3, provided a list of issues that the NEB would consider in its review of the Energy East Project application.<sup>132</sup> The NEB considered the enumerated list of issues according to the scope permitted by the CEAA 2012, the NEBA and the Government of Canada's January 2016 interim principles for reviewing major natural resource projects.<sup>133</sup>

A major aspect of the jurisdiction of the panel was the environmental effects of the project, and an extended scope was described in the Board's Factors and Scope of the Factors for the EA pursuant to the CEAA 2012 in Appendix 6.<sup>134</sup> The document provides that the Board's CEAA 2012 EA for the Energy East Project took into account the factors provided in paragraphs 19(1)(a) through (i) of that Act. The factors included the environmental effects of the designated project in relation to environmental effects that arise from malfunctions or accidents from the designated project. It also covered all cumulative environmental effects resulting from the designated project.<sup>135</sup> The scope extended beyond the environmental effects to the GHGs. Section 19(1)(j) of the CEAA 2012 directed the NEB to require about indirect GHG emissions that could result from

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<sup>130</sup> *Ibid.*

<sup>131</sup> *Ibid.*

<sup>132</sup> National Energy Board, “List of issues for Energy East” (23 August 2017) at 1, online (pdf): *Government of Canada* < <https://apps.neb-one.gc.ca/REGDOCS/Item/Filing/A85619>>.

<sup>133</sup> *Ibid.*

<sup>134</sup> *Ibid* at 8.

<sup>135</sup> National Energy Board, “Factors and Scope of the Factors for the Environmental Assessment pursuant to the Canadian Environmental Assessment Act, 2012 (CEAA 2012)” (23 August 2017) at 2, online (pdf): *Government of Canada* < <https://apps.neb-one.gc.ca/REGDOCS/Item/Filing/A85619>>.

the project, including emissions from incremental upstream oil production and upgrading, and emissions from incremental downstream refining and end-use, and emissions from third-party electricity generations.<sup>136</sup>

The Aroland First Nation Community and the Algonquin to Adirondacks Collaborative (A2A) urged the NEB to consider upstream and downstream emissions of the designated project in the assessment process.<sup>137</sup>

Pembina was a commentator in the review panel of the Energy East Pipeline.<sup>138</sup> Pembina argued that the pipeline would have a cumulative adverse effect on the environment.<sup>139</sup> Citing the case of *Sumas Energy 2 Inc. v. Canada (NEB)*,<sup>140</sup> they argued that because "oilsands bitumen makes up the majority of product in the pipeline—and oilsands mining projects have been determined by Canada's Governor in Council to generate significantly, adverse environmental impacts, as defined by the CEAA 2012 — the Board must consider whether the cumulative environmental effects in connection with the Project are justified."<sup>141</sup> Their argument was on the premise that if the NEB approved the project, the project would have resulted in an increase in oil sand production and

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<sup>136</sup> National Energy Board, "File OF-Fac-Oil-E266-2014-01 02" (23 August 2017) at 4-6, online (pdf): *National Energy Board* <<https://www.ceaa-acee.gc.ca/050/documents/p80079/118965E.pdf>>.

<sup>137</sup> Aroland First Nation, "A83902 Aroland First Nation - Aroland First Nation - Energy East Letter of Comment - Draft List of Issues and EA Scope" (29 May 2017) at 5-6, online (pdf): *Canada Energy Regulator* <[https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/2432218/2540913/2797619/2798228/3278223/A83902-1\\_2017-05-29\\_Aroland\\_First\\_Nation\\_-\\_Energy\\_East\\_NEB\\_Scope\\_and\\_Issues\\_Comments\\_-\\_A5Q4I9.pdf?nodeid=3277671&vernum=-2](https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/2432218/2540913/2797619/2798228/3278223/A83902-1_2017-05-29_Aroland_First_Nation_-_Energy_East_NEB_Scope_and_Issues_Comments_-_A5Q4I9.pdf?nodeid=3277671&vernum=-2)>; Algonquin to Adirondacks Collaborative, "A84056 Algonquin to Adirondacks Collaborative - Letter of Comment - List of Issues and EA Scope for Energy East" (last visited 12 April 2020) at 1-2, online (pdf): *Canada Energy Regulator* <[https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/2432218/2540913/2797619/2798787/3281975/A84056-1\\_2017-05-31\\_-\\_A2A\\_Comments\\_on\\_Energy\\_East\\_Draft\\_List\\_of\\_Issues\\_and\\_EA\\_Scoping\\_-\\_A5Q6J9.pdf?nodeid=3281859&vernum=-2](https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/2432218/2540913/2797619/2798787/3281975/A84056-1_2017-05-31_-_A2A_Comments_on_Energy_East_Draft_List_of_Issues_and_EA_Scoping_-_A5Q6J9.pdf?nodeid=3281859&vernum=-2)>.

<sup>138</sup> Pembina Institute, "Application to Participate (A67727)" (2 March 2015) at 2-4, online (pdf): *National Energy Board* <<https://apps.cer-rec.gc.ca/REGDOCS/File/Download/2696484>>.

<sup>139</sup> *Ibid.*

<sup>140</sup> *Ibid.*

<sup>141</sup> *Ibid.*

therefore increase the environmental effects, particularly GHG emissions, among other environmental factors.<sup>142</sup>

Ultimately, the proponents cancelled the application for the Energy East Pipeline.<sup>143</sup>

#### **3.4.4.5 Trans Mountain Expansion Project**

The Trans Mountain Expansion Project is an expansion of the original Trans Mountain Pipeline built-in 1953.<sup>144</sup> The development seeks to expand the capacity by the twinning of the existing pipeline, which stretched 1,150-Kilometres between Edmonton and British Columbia.<sup>145</sup> The Trans Mountain Expansion seeks to add 300,000 barrels per day to have a capacity of 890,000 barrels per day, and the new pipeline will carry heavy oils.<sup>146</sup> Also, with the expansion of the pipeline system, there will be an addition of pump stations, storage tanks, and construction of a new dock in Burnaby, which will aid the transportation to foreign waters.<sup>147</sup> The expansion of the Trans Mountain Pipeline is hoped to lessen Canadian dependency on U.S. markets where Canadian oil is under-priced and creates other markets in Asia in which Canadian oil can be sold at a premium.<sup>148</sup>

The project application to the NEB was carried out by the Trans Mountain Pipeline ULC.<sup>149</sup> It sought a certificate of public convenience and necessity, according to Part III of the NEBA.<sup>150</sup>

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<sup>142</sup> *Ibid.*

<sup>143</sup> Macleans, “TransCanada cancels plans for Energy East pipeline” (5 October 2017), online: *Macleans* < <https://www.macleans.ca/economy/transcanada-cancels-plans-for-energy-east-pipeline/>>.

<sup>144</sup> Environment and Climate Change Canada, “Trans Mountain Pipeline ULC - Trans Mountain Expansion Project Review of Related Upstream Greenhouse Gas Emissions Estimates” (19 May 2016) at 5, online (pdf): *Government of Canada* < <https://www.ceaa-acee.gc.ca/050/documents/p80061/114550E.pdf>>.

<sup>145</sup> *Ibid.*

<sup>146</sup> *Ibid.*

<sup>147</sup> *Ibid* at 5-6

<sup>148</sup> *Ibid.*

<sup>149</sup> Trans Mountain Pipeline ULC, “Trans Mountain Expansion Project An Application Pursuant to Section 52 of the National Energy Board Act” (2013) at 4B-1, online (pdf): *National Energy Board* < <https://apps.neb-one.gc.ca/REGDOCS/Item/Open/2392888>>.

<sup>150</sup> *Ibid.*

The NEB hearing panel was responsible for determining whether the project was in the Canadian public interest after considering its environmental assessment.<sup>151</sup> The NEB then conducted an environmental assessment of the project pursuant to powers granted by section 29 of the CEAA 2012 and section 52 of the NEBA. Among the matters considered under the environmental assessment were the GHG emissions from the project.<sup>152</sup>

The NEB then relayed its report of its findings and recommended to the Governor in Council (GIC) that the project could move forward subject to 157 conditions.<sup>153</sup> However, the Trudeau government released the Interim Measures for pipeline reviews on January 27, 2016, which stated additional factors that were to be considered in any assessment of projects.<sup>154</sup> As part of the interim measures, in considering the environmental assessment of pipelines, the assessing body had to assess the upstream GHG emissions associated with the project, then make the information gathered available to the public.<sup>155</sup>

The assessment of the upstream GHGs of the project was an estimate of the GHGs that would be released from the expansion as a result of upstream extraction, processing, and refining of crude product.<sup>156</sup> The estimate did not take into consideration the previous capacity of the Trans Mountain Pipeline, but estimates were limited to the capacity of the expansion. The assessment of the upstream GHGs from the expansion includes emissions from gases like carbon dioxide, methane and nitrous oxide from industrial processes, flaring, venting, fugitive sources and

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<sup>151</sup> National Energy Board, “Trans Mountain Project” (May 2016) at 2-3, online (pdf): *National Energy Board* <<https://www.ceaa-acee.gc.ca/050/documents/p80061/114562E.pdf>>.

<sup>152</sup> Government of Canada, “Explanatory Note to OIC P.C. 2018-1177” (9 September 2018) at 3277, online (pdf): *Government of Canada* <<https://iaac-aeic.gc.ca/050/documents/p80061/125707E.pdf>>.

<sup>153</sup> National Energy Board, “Trans Mountain Project status” (last visited 18 September 2019) at 1, online (pdf): *National Energy Board* <<https://www.cer-rec.gc.ca/pplctnflng/mjrpp/trnsmntnxpnsn/prjctstts-eng.pdf>>.

<sup>154</sup> *Ibid.*

<sup>155</sup> *Ibid.*

<sup>156</sup> *Environment and Climate Change Canada, supra* note 144 at 8-9.

combustion.<sup>157</sup> It is important to note that the gases and their sources were assessed based on their global warming potential. However, the assessment did not cover downstream GHG emissions, indirect upstream emissions like land-use-changes, emissions from the production of equipment used for the expansion activities, and the electricity used in production.<sup>158</sup>

To be specific, the assessment of the expansion took into consideration the product mix expected to be transported by the expanded pipeline.<sup>159</sup> The products include conventional light crude oil, high-density crude oil, and synthetic crude.<sup>160</sup>

In the assessment, the Environment and Climate Change Canada (ECCC) projected that the upstream GHG emissions from the expansion of the Trans Mountain could range from 20.3 to 25.7 Mt of CO<sub>2</sub> eq per year.<sup>161</sup> In arriving at the estimates, ECCC calculated the GHG emissions from the ECCC's Canada's Biennial Report on climate change, which was submitted to the UNFCCC and the NEB's production report projection contained in Canada's Energy Future 2016.<sup>162</sup> On their assessment concerning the upstream effect from the project's GHGs, it was argued that regardless of the upstream emission from the proposed expansion, upstream emission from other means of transportation like rail will still occur.<sup>163</sup> On the matter of whether the project would bring increased emission from the upstream sector, they argued that several factors would determine the increment.<sup>164</sup> Such factors include the total dependence on the project, and crude-by-rail was not used as a means of transportation.<sup>165</sup> On that note, the assessment calculated an increased emission. Also, the oil price fluctuations would determine the emission from the pipeline as this affects

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<sup>157</sup> *Ibid.*

<sup>158</sup> *Ibid.*

<sup>159</sup> *Ibid* at 9-10.

<sup>160</sup> *Ibid.*

<sup>161</sup> *Ibid* at 11-12.

<sup>162</sup> *Ibid* at 16.

<sup>163</sup> *Ibid* at 34-35.

<sup>164</sup> *Ibid.*

<sup>165</sup> *Ibid.*

demand and supply and the price differences between transporting by rail and pipelines.<sup>166</sup> Thus, emissions would increase if the price of oil is low, but an increase will reduce the purchase of oil; in essence, emissions from the project would vary based on oil price fluctuation.<sup>167</sup> Furthermore, the assessment indicated that global emissions would be unchanged even with the project because if the project is not built in Canada, then there is the likelihood that investments will occur in other jurisdictions. Thus, the project was approved.<sup>168</sup>

The latter assessment of the project considered the upstream GHG emissions from the project but failed to consider the downstream effects. However, this is a result of the interim pipeline rules excluding downstream emissions.

### **3.5 Conclusion**

A high-level examination of the various scenarios of energy projects highlighted above shows an uneven application of the GHGs considerations in the EA process. One of the reasons for the inconsistent consideration of GHGs in the federal EA process was the absence of legislation mandating and guiding assessment of GHGs in the EA process of designated projects. However, the various guidance under the CEAA 2012 era, like the 2003 Guidance, the interim measures for pipeline reviews, and specific projects' terms of reference, created a basis for GHGs to be considered in energy projects under CEAA 2012 even without express legislative enactment. Also, courts are willing to recognize GHGs as a consideration in oil sands cases, as seen in the Jackpine Mine Expansion Project. In the Frontier Project, GHGs were considered, thereby showing the trend and willingness by assessing bodies to consider GHGs in the assessment process regardless of the absence of legislation.

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<sup>166</sup> *Ibid.*

<sup>167</sup> *Ibid.*

<sup>168</sup> *Ibid.*

However, with the inception of the new IAA,<sup>169</sup> there is an express mandate for assessing bodies to consider GHGs in the assessment process for energy projects.<sup>170</sup>

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<sup>169</sup> *Impact Assessment Act*, SC 2019, c. 28, s 1.

<sup>170</sup> *Ibid.*



## **Chapter 4: Understanding the “Climate Change Consideration” Implications in the Impact Assessment Act.**

### **4.1 Introduction**

The IAA<sup>1</sup> is a shift from the CEAA 2012 concerning GHG consideration in the environmental assessment process in Canada. This shift is represented in the IAA requirement to include climate change considerations in the IA — IA is used in this chapter rather than EA because EA is focused on the environment and related effects, but IA tends to be broader, including socio-economic dimensions — of a designated project.

Chapter four begins with an overview of the IAA as a novel statute to replace the previous environmental assessment system. The overview of the IAA includes key differences between the IAA and CEAA 2012, the new features of the IAA, and a summary of how IA will be conducted for a designated project.

Chapter four includes a discussion of the purpose of the IAA concerning GHGs. It also explores the importance of sustainability as a concept and purpose of the IAA and the implications of sustainability in the discussion of climate change considerations

After highlighting the purpose of the IAA, chapter four examines the specific requirements for an IA under the IAA. The stages include the planning stage, the assessment stage and the decision-making stage. During the decision-making stage, the Minister (or federal Cabinet, as the case may be) determines whether a designated project should be approved in the public interest based on several factors, including whether the project will hinder or contribute to Canada’s climate change obligations.

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<sup>1</sup> *Impact Assessment Act*, SC 2019, c. 28, s 1.

Chapter four provides a more in-depth overview of the various provisions of the IAA relating to climate change or GHGs and the implications of the provision. This chapter examines the Final SACC to understand its importance in the assessment process.

Furthermore, it examines several comments and criticisms of the IAA provisions requiring Canada's climate change commitment in the IA of a designated project.

Chapter four examines the Gazoduq Project, which is a project that is undergoing IA under the IAA. In reviewing this project, this chapter will explore the nature of the proposed project, the GHG emissions from the proposed project, and how the Agency seeks to address the GHGs from the project vis-à-vis the climate change considerations in the IA.

Chapter four concludes by examining the role of the IAA in achieving Canada's *Paris Agreement* goals.

## **4.2 Context and Background of the IAA**

The Government of Canada, on June 21, 2019, gave royal assent to the IAA 2019.<sup>2</sup> On August 28 and 29, 2019, the IAA came into force, thereby replacing the CEAA 2012<sup>3</sup> as the federal EIA statute.<sup>4</sup>

The government implemented its promise to revamp the EIA system in Canada as a result of the shortcomings of the CEAA 2012 by the establishment of an external expert panel in August 2016 to review the scope and process of Canada's federal EIA legislation.<sup>5</sup> The review aimed to restore public confidence in EIA, to introduce a new EIA regime that is fair in its processes, and

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<sup>2</sup> Parliament of Canada, "Bill C-69" (last visited 3 December 2019), online: *Parliament of Canada* <<https://www.parl.ca/DocumentViewer/en/42-1/bill/C-69/royal-assent>>.

<sup>3</sup> *Canadian Environmental Assessment Act*, 2012, SC 2012, c. 19, s. 52

<sup>4</sup> *Ibid.*

<sup>5</sup> Canada, Office of the Prime Minister, "Minister of Environment and Climate Change Mandate Letter," by Rt. Hon. Justin Trudeau, PC, MP, Prime Minister of Canada (Ottawa: November 2015), online: Government of Canada <<http://pm.gc.ca/eng/Ministerenvironment-and-climate-change-mandate-letter>>.

to get Canadian resources to market.<sup>6</sup> The expert panel released a report titled “The Final Report of the Expert Panel for the Review of Environmental Assessment Processes” (the Report).<sup>7</sup> The Report contains their findings and several recommendations needed to restore public confidence in the IA system in Canada. Some of the significant recommendations include: changing the focus of EA to IA based on sustainability, the establishment of a single Impact Assessment Agency with the final decision on IA; creating new triggers for IA of a project based on a project list and ministerial discretion among others.<sup>8</sup>

The IAA changes the federal agency responsible for assessment from the Canadian Environmental Assessment Agency to the Impact Assessment Agency of Canada (IAAC, or the Agency).<sup>9</sup> The Agency is the single federal agency responsible for IA.<sup>10</sup> This is different from the CEAA 2012 regime, in which three agencies could lead an assessment, depending on the type of project to be reviewed — the three agencies were the Canadian Environmental Assessment Agency, the CNSC, and the NEB.<sup>11</sup>

The Agency under the IAA will be responsible for all IA of projects not subject to a review panel, including projects regulated by the Canadian Nuclear Safety Commission and the Canadian

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<sup>6</sup> “Expert Panel Report Building Common Ground: A New Vision for Impact Assessment in Canada” (last visited 3 December 2019), online: *Government of Canada* <<https://www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews/environmental-assessment-processes/building-common-ground.html>>.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*

<sup>9</sup> Kai Alderson et al, “The New Federal Impact Assessment Act” (28 August 2019), online: *Fasken* <<https://www.fasken.com/en/knowledge/2019/08/the-new-federal-impact-assessment-act/>>.

<sup>10</sup> “Basics of Environmental Assessment” (last visited 3 December 2019), online: <<https://www.canada.ca/en/impact-assessment-Agency/services/environmental-assessments/basics-environmental-assessment.html>>.

<sup>11</sup> *Kai Alderson, supra* note 9; Canadian Environmental Assessment Agency, “Building Common Ground A New Vision for Impact Assessment in Canada: The Final Report of the Expert Panel for the Review of Environmental Assessment Processes” (last visited 24 July 2020) at 49-51, online (pdf): *Government of Canada* <<https://www.canada.ca/content/dam/themes/environment/conservation/environmental-reviews/building-common-ground/building-common-ground.pdf>>.

Energy Regulator.<sup>12</sup> The process of IA in the IAA is a mix of responsibilities and duties from the proponents of the projects, the assessing Agency, the Minister (or federal Cabinet, as the case may be). It is, therefore, important to understand the IA process in the IAA.

### 4.3 The Purpose of the IAA

Section 6 sets out the purposes of the IAA. Section 6(1)(a) states that one of the purposes of the IAA is to promote sustainability.<sup>13</sup> Sustainability is defined in the IAA as “the ability to protect the environment, contribute to the social and economic well-being of the people of Canada and preserve their health in a manner that benefits present and future generations.”<sup>14</sup> There are three significant pillars of sustainability, which are environmental sustainability, economic sustainability, and social sustainability.<sup>15</sup> On the matter of environmental sustainability, the IAA seeks to protect all aspects of the environment for present and future use. One of the greatest threats to the environment is climate change, and one can state that the IAA seeks to promote environmental sustainability by promoting actions against climate change.<sup>16</sup> Also, section 6(1)(c) states that one of the purposes of the IAA is to take into account both positive and adverse effects from a designated project.<sup>17</sup> Accordingly, proponents of the projects and assessors must consider both positive and adverse effects from the projects, which include the adverse impact on the climate. Section 6(1)(d) states that a project assessment will consider adverse direct or incidental effects from the designated project, and such effects may include effects on the climate.<sup>18</sup>

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<sup>12</sup> Jill Baker & Alan Calder, “Six Things You Need to Know About Bill C-69, Canada’s Impact Assessment Act (IAA)” (26 August 2019), online: *Golder* < <https://www.golder.com/insights/six-things-you-need-to-know-about-bill-c69-canadas-impact-assessment-act-iaa/>>.

<sup>13</sup> *Impact Assessment Act*, *supra* note 1 at s 6.

<sup>14</sup> *Ibid* at s 2.

<sup>15</sup> “what is sustainability?” (last visited 4 December 2019), online: *Mcgill* <<https://www.mcgill.ca/sustainability/files/sustainability/what-is-sustainability.pdf>>.

<sup>16</sup> *Ibid*.

<sup>17</sup> *Impact Assessment Act*, *supra* note 1 at s 6.

<sup>18</sup> *Ibid*.

The IAA encourages the Government of Canada, the Minister, the Agency and federal authorities to exercise their functions in the IA process to promote scientific integrity, honesty, objectivity, thoroughness and accuracy.<sup>19</sup> The IA process of a designated project usually involves the input and expertise of several professionals, including policymakers, legal practitioners, economists, engineers, political and social scientists, health care professionals, and scientists.<sup>20</sup> However, in weighing the inputs from the vast range of expertise and wealth of opinions, the Agency and decision-makers must stay true and are guided by the science relating to the project.<sup>21</sup> It is important to ensure that politics and sentiments do not adversely impact the purpose of the IA. Also, the IA process should be done honestly and credibly to retain public trust in the IA system.<sup>22</sup>

Combatting climate change or reducing GHGs is not expressly mentioned as one of the purposes. However, climate change considerations are implicit in the purposes of the act because it is important to take steps on climate change mitigation if one is to pursue sustainability, understand the adverse effects of a project, and protect the environment.

There have been divergent views on the purposes and the potential effectiveness of the IAA, and sometimes the views are from opposite spectrums of energy, environmental and sustainability discussion. These views suggest that, on the one hand, the IAA is an instrument to hinder energy development in Canada as a result of its inclusion of GHG as a requirement for consideration of an energy project, thereby making Canada a less attractive energy hub to oil and gas investors.<sup>23</sup> The other view is that the GHG requirement is not substantial to make a

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<sup>19</sup> *Ibid* at s 6(3).

<sup>20</sup> Angus Morrison-Saunders & John Bailey, "EIA Practitioner Perceptions on the Role of Science in Impact Assessment" (23 July 2020), online: *Semantic Scholar* <<https://pdfs.semanticscholar.org/2b43/6fdf0ee909fa88da67e08640c539b48957e9.pdf>>.

<sup>21</sup> *Ibid*.

<sup>22</sup> *Ibid*.

<sup>23</sup> Josh K. Elliott, "Why critics fear Bill C-69 will be a 'pipeline killer'" (last modified 12 June 2019), online: Global News <<https://globalnews.ca/news/5416659/what-is-bill-c69-pipelines/>>; Licia Corbella, "Oil execs say Bill C-69 still

meaningful impact on the climate change front, and a reason is that the IAA exempts several projects from IA, i.e. that there is no strong action on the climate change front.<sup>24</sup> The discussion in this paper aims to bring clarity to this debate.

#### **4.4 Impact Assessment Process Under the IAA**

##### **4.4.1 Scope of Assessment in the IAA**

IA in the IAA is a shift from CEAA 2012, which used environmental assessment; instead, one of the differences between IA and environmental assessment is the scope.<sup>25</sup> Under the IAA, IA takes into consideration environmental impacts, social impacts, health impacts, impacts on indigenous peoples and the economy.<sup>26</sup>

The IAA defines IA as “an assessment of the effects of a designated project that is conducted in accordance with this act.”<sup>27</sup> The designated projects are the projects that are carried out within the federal jurisdiction and fall into two categories, as provided under section 2.<sup>28</sup> The two types of projects are; the projects designated by regulation pursuant to paragraph 109(b) and projects designated in an order made by the Minister under subsection 9(1).<sup>29</sup>

Although the IA under section 2 is restricted to activities of designated projects carried out in Canada, one of its overarching goals is to reduce global climate change because the definition

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so flawed no pipelines will be built” (14 June 2019), online: Calgary Herald <<https://calgaryherald.com/news/local-news/corbella-oil-execs-say-bill-c-69-still-so-flawed-no-pipelines-will-be-built>>.

<sup>24</sup> “Federal impact rules would exempt major oil and gas projects from environmental assessment while discouraging renewables” (1 May 2019), online: Environmental Defence < <https://environmentaldefence.ca/2019/05/01/federal-impact-rules-exempt-major-oil-gas-projects-environmental-assessment-discouraging-renewables/>>.

<sup>25</sup> Peter Brady, Joanna Rosengarten & Stephanie Axmann, “Moving Towards Sustainability and Public Interest: Federal Government Introduces the Impact Assessment Act” (9 February 2018), online: *McCarthy Tetrault* <<https://www.mccarthy.ca/en/insights/blogs/canadian-era-perspectives/moving-towards-sustainability-and-public-interest-federal-government-introduces-impact-assessment-act>>

<sup>26</sup> *Ibid.*

<sup>27</sup> *Impact Assessment Act*, *supra* note 1 at s 2.

<sup>28</sup> *Ibid.*

<sup>29</sup> *Ibid.*

of an “environmental effect” under section 2 covers environmental changes to the environment in Canada or outside Canada.<sup>30</sup>

#### 4.4.2 How to Trigger the Impact Assessment Process Under the IAA

Under the IAA, there are two triggers for an IA to be conducted on a designated project. The first trigger is contained in the project list, and the second is the power of the Minister to designate a physical activity for IA.<sup>31</sup>

##### 4.4.2.1 Designated Project List

The main trigger for an IAA are matters contained in the designated project list regulation.<sup>32</sup> The designated project list is an approach similar to the CEAA 2012. The IAA applies to any project on the *Project List Regulation* (SOR/2019-284).<sup>33</sup>

The IAA provision of the designated project list weakens some threshold of projects to be considered in contrast to the project list under CEAA 2012.<sup>34</sup> For instance, the IAA increased the threshold for ore production for some mining projects like metal mines, coal mines and diamond mines.<sup>35</sup> Thus, mining projects that generate more than 5,000 tonnes of ore per day are included in the project list, and this differs from the threshold of 3,000 tonnes per day in the CEAA 2012 project list.<sup>36</sup> Also, new pipelines have a threshold of 75 km as opposed to the CEAA 2012 threshold of 40 km.<sup>37</sup> The project list in the IAA has some weaker threshold than the CEAA 2012 project list threshold, and a criticism of the IAA project list can be that it eliminates several projects

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<sup>30</sup> *Ibid.*

<sup>31</sup> Kai Alderson, *supra* note 9.

<sup>32</sup> *Physical Activities Regulations*, SOR/2019-285.

<sup>33</sup> Rodney Northey, Liane Langstaff & Anna Côté, “Five Things Project Proponents Need To Know About Canada's New Impact Assessment Act” (27 August 2019), online: *gowlingwlg* <<https://gowlingwlg.com/en/insights-resources/articles/2019/project-proponents-and-the-impact-assessment-act/>>.

<sup>34</sup> Sharon Mascher, “As Bill C-69 Receives Royal Assent, Will the Project List Deliver on the Promise?” (June 25, 2019), online: *ABlawg*, [http://ablawg.ca/wp-content/uploads/2019/06/Blog\\_SM\\_ProjectListC-69.pdf](http://ablawg.ca/wp-content/uploads/2019/06/Blog_SM_ProjectListC-69.pdf)

<sup>35</sup> *Ibid.*

<sup>36</sup> *Ibid.*

<sup>37</sup> *Ibid.*

from IA as it weakens the threshold of mining and pipelines to be reviewed.<sup>38</sup> Still, some new projects have been added, like in situ oil sands projects with a bitumen production capacity of 2,000 cubic metres per and offshore wind energy projects.<sup>39</sup>

However, will all projects contained in the designated project list automatically undergo IA?<sup>40</sup> Generally, all projects under the project list will undergo IA unless there is a federal decision not to require an assessment. The Agency makes a screening decision as to whether an assessment is required. This is done on a case-by-case basis.<sup>41</sup>

#### **4.4.2.2 Ministerial Designation**

As IA will be carried out on projects contained in the designated project list and by ministerial discretion.<sup>42</sup> The Minister has several functions in the IA process. One of the first functions of the Minister is his/her power to designate a physical activity for IA, even if the designated activity is not on the project list.<sup>43</sup> The power to designate a physical activity is based on whether the Minister believes that the physical activity will cause an adverse effect on the environment.<sup>44</sup> This function is particularly important because the IAA does not confine the Minister to the list of projects in the project list, and any project that will have a high GHG can be assessed even if it is not in the accepted list of projects, one can call this a safety mechanism.<sup>45</sup>

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<sup>38</sup> *Ibid.*

<sup>39</sup> *Kai Alderson, supra* note 9.

<sup>40</sup> Richard D. Lindgren, “Canadian Environmental Law Association” (23 July 2018), online: *CELA* <<https://www.cela.ca/IAA-myth-vs-fact>>.

<sup>41</sup> *Rodney Northey, Liane Langstaff & Anna Côté, supra* note 33.

<sup>42</sup> *Ibid.*

<sup>43</sup> *Impact Assessment Act, supra* note 1 at s 9(1).

<sup>44</sup> *Ibid.*

<sup>45</sup> *Ibid.*



### 4.4.3 Impact Assessments Steps Under the IAA

The IA steps under the IAA can be broken down into three phases. The first is the planning phase, the second is the assessment phase, and the third is the decision-making phase.

#### 4.4.3.1 The Planning Phase

The IAA introduces a new extended planning phase in the assessment of designated projects. The essence of the assessment planning phase is to determine the viability of an assessment for a project; to determine whether to coordinate and cooperate with other jurisdictions or agencies and to determine the scope and the modalities of the assessment.<sup>46</sup> The planning phase starts with the proponent of the project, submitting an initial project description to the Agency.<sup>47</sup> The initial project description contains the required information prescribed by the *Information and Management of Time Limits Regulations*.<sup>48</sup>

After the Agency receives a copy of the description, the Agency decides whether the information in the project description meets the requirements in section 3 and Schedule 1 of the *Information and Management of Time Limits Regulations* — one of the details to be included in the initial project description is the estimate of any GHG emissions associated with the project.<sup>49</sup> Once the Agency is satisfied with the initial project description, the Agency posts the initial project description online on the Agency’s internet site.<sup>50</sup> This encourages public participation<sup>51</sup> and

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<sup>46</sup> Meinhard Doelle & Chris Tollefson, *Environmental Law: Cases and Materials*, 3<sup>rd</sup> ed (Toronto: Carswell, 2019) at 615; Kai Alderson *et al*, *supra* note 9.

<sup>47</sup> Meinhard Doelle & Chris Tollefson, *supra* note 46 at 615; Kai Alderson *et al*, *supra* note 9; *Impact Assessment Act*, *supra* note 1 at s 10(1).

<sup>48</sup> Meinhard Doelle & Chris Tollefson, *supra* note 46 at 615; Kai Alderson *et al*, *supra* note 9; *Impact Assessment Act*, *supra* note 1 at s 10(1).

<sup>49</sup> Impact Assessment Agency of Canada, “Guide to Preparing an Initial Project Description and a Detailed Project Description” (last visited 24 July 2020), online: *Government of Canada* < [https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/guide-preparing-project-description-detailed-project-description.html#\\_Toc17794699](https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/guide-preparing-project-description-detailed-project-description.html#_Toc17794699)>.

<sup>50</sup> *Ibid.*

<sup>51</sup> *Impact Assessment Act*, *supra* note 1 at s 11.

consultation with “provincial, territorial and Indigenous jurisdictions, Indigenous groups, the public, federal authorities and other participants to inform the Summary of Issues.”<sup>52</sup>

Afterwards, the Agency must provide the proponent with a summary of relevant issues raised by the public, indigenous groups, or any jurisdiction and how the proponent intends to address these issues.<sup>53</sup> The proponent must then provide the Agency with a notice setting out how it plans to address these issues, and the Agency will request that the proponent submits a Detailed Project Description within 30 calendar days.<sup>54</sup> The Detailed Project Description must meet the requirements set out in section 4 and Schedule 2 of the *Information and Management of Time Limits Regulations*.<sup>55</sup>

The Agency must decide within 180 days of posting the project description online, whether it intends to commence an IA on the proposed project.<sup>56</sup> The Agency’s decision is based on several factors, which include the possibility of the designated project causing adverse effects or any other factor that the Agency considers relevant.<sup>57</sup>

After notice of commencement of the IA by the Agency, the Agency must take into consideration the scope of factors sets out in section 22(1) in determining the information and studies it considers necessary for the IA.<sup>58</sup> The scope of factors to consider in section 22(1) is broader than the scope of factors that were required by section 19 of the CEAA 2012.<sup>59</sup> Some of

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<sup>52</sup> *Impact Assessment Agency of Canada*, *supra* note 49; *Impact Assessment Act*, *supra* note 1 at s 14(1).

<sup>53</sup> *Meinhard Doelle & Chris Tollefson*, *supra* note 46 at 615; *Kai Alderson et al*, *supra* note 9; *Impact Assessment Act*, *supra* note 1 at s 14(1); *Impact Assessment Agency of Canada*, *supra* note 49.

<sup>54</sup> *Meinhard Doelle & Chris Tollefson*, *supra* note 46 at 615; *Kai Alderson et al*, *supra* note 9; *Impact Assessment Act*, *supra* note 1 at s 15(1); *Impact Assessment Agency of Canada*, *supra* note 49.

<sup>55</sup> *Impact Assessment Agency of Canada*, *supra* note 49.

<sup>56</sup> *Meinhard Doelle & Chris Tollefson*, *supra* note 46 at 615-616; *Kai Alderson et al*, *supra* note 9; *Impact Assessment Act*, *supra* note 1 at s 16(1)(2) & 18; *Impact Assessment Agency of Canada*, *supra* note 49.

<sup>57</sup> *Meinhard Doelle & Chris Tollefson*, *supra* note 46 at 615-616; *Kai Alderson et al*, *supra* note 9; *Impact Assessment Act*, *supra* note 1 at s 16(2); *Impact Assessment Agency of Canada*, *supra* note 49.

<sup>58</sup> *Meinhard Doelle & Chris Tollefson*, *supra* note 46 at 615-616; *Kai Alderson et al*, *supra* note 9; *Impact Assessment Act*, *supra* note 1 at s 18; *Impact Assessment Agency of Canada*, *supra* note 49.

<sup>59</sup> *Meinhard Doelle & Chris Tollefson*, *supra* note 46 at 615-616.

the factors include; the changes to the environment and health likely to be caused by the designated project; the mitigation measures that will mitigate the adverse effect of the designated project; the purpose and need for the designated project; any alternative to the designated project; impact on indigenous rights and the traditional knowledge of Indigenous peoples; the project's contribution to sustainability; and the extent to which the effects of the designated project hinders or contributes to Canada's ability to meet its climate change obligations.<sup>60</sup>

One of the most significant additions to the scope of factors in the IAA is the climate change effects from the designated project, which is central to this thesis.

#### **4.4.3.2 The Assessment Process**

Under the IAA, the IA is conducted by the Agency or a review panel.<sup>61</sup> In an assessment by the Agency, the Agency will prepare a draft report which will be posted on their internet site for comments from the public.<sup>62</sup> After considering the comments from the draft report, the Agency submits a finalized report to the Minister no later than 300 days after the day on which the notice for comments on the draft report was published on the Agency's site.<sup>63</sup>

However, the Agency can seek an extension in conducting the assessment.<sup>64</sup> The extension has a time limit of 90 days, but the Governor in Council may extend the time limit by any number of times on the recommendation of the Minister.<sup>65</sup>

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<sup>60</sup> *Impact Assessment Act*, *supra* note 1 at s 22(1).

<sup>61</sup> *Impact Assessment Act*, *supra* note 1 at s 25(a).

<sup>62</sup> *Ibid* at s 25(b) & 28(1)(b).

<sup>63</sup> *Ibid* at s 28(2).

<sup>64</sup> *Ibid* at s 28(6).

<sup>65</sup> *Ibid* at s 28(7).

Within 45 days of the Agency posting a notice of the commencement of the IA online, the Minister may, if he or she is of the opinion that the project is in the public interest<sup>66</sup> or the project is regulated under the *Nuclear Safety and Control Act* and the CERA,<sup>67</sup> refer the IA to the review panel.<sup>68</sup> The assessment must be carried out within 300 days but must not exceed 600 days if it is necessary to exceed 300 days.<sup>69</sup>

An assessment may also take the form of a joint review panel when both the federal government and a provincial government have jurisdiction over a designated project. This is established by the Minister, who can agree to establish a joint review panel.<sup>70</sup> The agreement to jointly establish a review panel must include the factors of consideration under section 22(1), and one of such factors is the extent to which the designated project affects Canada's ability to meet its climate change commitments.<sup>71</sup>

Under the IAA, there is a provision for substitution, which is similar to the provisions in the CEAA 2012.<sup>72</sup> Section 31 permits the Minister to allow for the substitution of a jurisdiction's assessment process of a designated project for the assessment process under the IAA.<sup>73</sup>

The Minister is permitted to approve a substitution if the Minister is satisfied that:<sup>74</sup>

the process to be substituted will include a consideration of the factors set out in subsection 22(1); federal authorities that are in possession of relevant specialist or expert information or knowledge will be given an opportunity to participate in the

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<sup>66</sup> *Ibid* at s 36(1).

<sup>67</sup> *Kai Alderson et al, supra* note 9.

<sup>68</sup> *Impact Assessment Act, supra* note 1 at s 37(1) & 37(2).

<sup>69</sup> *Ibid* at s 37(2).

<sup>70</sup> *Ibid* at s 39(1).

<sup>71</sup> *Ibid* at s 44(1).

<sup>72</sup> *Kai Alderson et al, supra* note 9.

<sup>73</sup> *Impact Assessment Act, supra* note 1 at s 31.

<sup>74</sup> *Ibid* at s 33.

assessment; the jurisdiction that is following the process to be substituted has the ability to enter into an arrangement with any jurisdiction referred to in paragraphs (e) to (g) of the definition jurisdiction in section 2 respecting cooperation between those jurisdictions in the conduct of the assessment; the process to be substituted will include consultations with any Indigenous group that may be affected by the carrying out of the designated project; the public will be given an opportunity to participate meaningfully in the assessment and to provide comments on a draft report; the public will have access to records in relation to the assessment to enable its meaningful participation; at the end of the assessment, a report will be submitted to the Minister; the report will be made available to the public; and (i) any other conditions that the Minister establishes are or will be met.

An example of a project that was approved for substitution by the Minister<sup>75</sup> is the Cedar LNG Project in British Columbia.<sup>76</sup> It is a designated project to “construct and operate a floating liquefied natural gas (LNG) processing facility and marine export terminal near Kitimat, British Columbia.<sup>77</sup>” It will be functional for 25 years, and the projected LNG from this project is in the tune of 400 to 500 million standard cubic feet per day (11.3 to 14.15 million cubic metres [m3]) of natural gas which equals 3 to 4 million tonnes of LNG per year with a storage capacity of up to

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<sup>75</sup> Impact Assessment Agency of Canada, “Notice of Substitution Approval under the Impact Assessment Act” (last visited 15 February 2020), online: *Government of Canada* < <https://iaac-aeic.gc.ca/050/evaluations/document/133665?culture=en-CA>>.

<sup>76</sup> Impact Assessment Agency of Canada, “Cedar LNG Project — Participant Funding Available” (4 December 2019), online: *Government of Canada* < <https://www.canada.ca/en/impact-assessment-Agency/news/2019/12/cedar-lng-project--participant-funding-available.html>>.

<sup>77</sup> Stantec Consulting Ltd, “Project Description Summary: Cedar LNG Liquefaction and Export Terminal” (2019) at 2-3, online (pdf): *CEAA* < <https://ceaa-acee.gc.ca/050/documents/p80208/132668E.pdf>>..

250,000 cubic metres of LNG.<sup>78</sup> The Minister approved for the IA of this project to be under the British Columbia Environmental Assessment Act.<sup>79</sup>

#### 4.4.3.3 The Decision-Making Phase

In considering the IA report, the Minister (or federal Cabinet, as the case may be) considers the adverse direct and incidental effects and whether they are in the public interest.<sup>80</sup> After considering the report, the Minister (or federal Cabinet, as the case may be) must determine whether, based on the project's adverse effects, the project is in the public interest based on five factors.

The factors include the extent to which the designated project contributes to sustainability; any significant adverse direct or incidental effects from the designated project; the implementation of appropriate mitigation measures by the Minister or the Governor in Council; adverse impacts on indigenous people and indigenous rights as affirmed by section 35 of the Constitution Act, 1982; and how the effects from the designated project hinder or contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change.<sup>81</sup>

This is a shift from the CEAA 2012. Under that previous act, the test in determining whether a project can move forward was whether there was a significant adverse effect from the project, and, if so, whether such effects were “justified in the circumstances.”<sup>82</sup> The IAA public interest determination is broader in scope and makes Canada's climate change commitments an essential public interest consideration. The implication is that a project might not be approved

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<sup>78</sup> *Ibid.*

<sup>79</sup> *Impact Assessment Agency of Canada, supra note 75.*

<sup>80</sup> *Ibid* at s 60.

<sup>81</sup> *Ibid* at s 63.

<sup>82</sup> Policy and guidance, “Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects under CEAA 2012” (last visited 16 December 2019), online: *Government of Canada* <<https://www.canada.ca/en/impact-assessment-Agency/services/policy-guidance/determining-whether-designated-project-is-likely-cause-significant-adverse-environmental-effects-under-ceaa-2012.html>>.

because it hinders Canada's climate change consideration.<sup>83</sup> The issue of public interest determination and climate change is discussed in more detail in the latter part of this chapter.

#### 4.5 Climate Change Provision in the IAA

The primary purpose of an IA is to outline the environmental impacts of a designated project. The IA will identify, measure, evaluate, and report the environmental impacts and also outline the adaptation and mitigation efforts.<sup>84</sup> The IAA mandates that Canada's climate change obligations and policies are considerations for assessing a designated project.<sup>85</sup> Section 22(1) states that during the IA process, the Agency or a review panel should take into account "the extent to which the effects of the designated project hinder or contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change."<sup>86</sup> Concerning the decision-making phase, the Minister or the Governor in Council should consider "the extent to which the effects of the designated project hinder or contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change."<sup>87</sup>

This section will evaluate the relevant provisions concerning climate change in the IAA. In doing so, it will examine in detail the final version of the SACC.<sup>88</sup> This analysis of the provisions of the IAA and the SACC will demonstrate that the IAA brought in a significant shift from previous

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<sup>83</sup> Environment and Climate Change Canada, "Strategic Assessment of Climate Change" (last modified 5 December 2018) at 18, online (pdf): *Strategic Assessment of Climate Change* <<https://www.strategicassessmentclimatechange.ca/15112/widgets/61020/documents/36886>>.

<sup>84</sup> "What is Impact Assessment?", (last visited 9 December 2019), online: *Convention of Biological Biodiversity* <<https://www.cbd.int/impact/whatis.shtml>>; *Impact Assessment Act*, *supra* note 1 at s 1.

<sup>85</sup> Review of environmental and regulatory processes, "A proposed new impact assessment system", (last visited 9 December 2019), online: *Government of Canada* <<https://www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews/environmental-assessment-processes.html>>.

<sup>86</sup> *Impact Assessment Act*, *supra* note 1 at s 22(1)(i).

<sup>87</sup> *Ibid* at s 63(e).

<sup>88</sup> *Environment and Climate Change Canada*, *supra* note 83 at 1.

federal environmental assessment regimes. The following discussion also comments on whether climate change considerations in IA may truly fulfil the intended purpose of the Act.

#### **4.5.1 Overview of the IAA Provisions on Climate Change**

This section will only examine the specific climate provisions in section 22(1) and section 63. The IAA sets out specific factors to be considered in the assessment of a designated project.<sup>89</sup> With respect to climate change specifically, section 22(1) states that “the IA of a designated project, whether it is conducted by the Agency or a review panel, must take into account...the extent to which the effects of the designated project hinder or contribute to the Government of Canada’s ability to meet its environmental obligations and its commitments in respect of climate change.”<sup>90</sup> This provision makes Canada’s climate change commitments an essential element in the assessment of a designated project by the Agency or a review panel.<sup>91</sup>

Concerning the assessment by the Agency, the Agency must ensure that the IA is conducted and afterward, a report is prepared, which includes the effects of the project.<sup>92</sup> The report must set out the effects that are likely to be caused by carrying out the designated project.<sup>93</sup> The report must state whether the effects are adverse, direct or incidental.<sup>94</sup> Thus, the report will set out how the project will affect the climate. After the Agency drafts the report, it then transmits the report to the Minister.<sup>95</sup>

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<sup>89</sup> *Impact Assessment Act*, *supra* note 1 at s 22.

<sup>90</sup> *Ibid* at s 22(1).

<sup>91</sup> Robert B. Gibson, "Assessment law is still too vague to achieve lasting goals", (11 october 2019), online: *Policy Options Policies*.

<sup>92</sup> *Impact Assessment Act*, *supra* note 1 at s. 25(a) and (b).

<sup>93</sup> *Ibid* at s 28(3).

<sup>94</sup> *Ibid* at s 28(2).

<sup>95</sup> *Ibid* at s 55(1).



Concerning an assessment by a review panel, once the Minister refers the IA of a designated project to a review panel and enters into an agreement to establish a review panel with any jurisdiction jointly,<sup>96</sup> the agreement must provide that the IA will consider factors set out in section 22(1), including the climate change consideration.<sup>97</sup>

Upon receiving the report by the Agency, the Minister (or federal Cabinet, as the case may be), must determine whether the adverse effects from the designated project are significant and in the public interest based on factors referred to in section 63.<sup>98</sup>

Then based on the determination of section 60, the Minister (or federal Cabinet as the case may be) must determine whether a designated assessed project is in the public interest. This is done by considering, among other factors, the extent to which the designated project will hinder or contribute to Canada's ability to meet its environmental and climate change obligations.<sup>99</sup>

The inclusion of section 63(e)<sup>100</sup> is that the Minister (or federal Cabinet as the case may be) are required to determine the extent to which an assessed project would hinder or contribute to meeting Canada's environmental obligations and climate change commitments.<sup>101</sup> The inclusion of sections 22 and 63 shows that the IAA raises the bar – or at least clarifies – the federal assessment requirements beyond what was in the CEAA 2012 or other previous legislation when it comes to IA.<sup>102</sup>

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<sup>96</sup> *Ibid* at s 39(1).

<sup>97</sup> *Ibid* at s 43.

<sup>98</sup> *Ibid* at s 60(1).

<sup>99</sup> *Ibid* at s. 63.

<sup>100</sup> *Ibid*.

<sup>101</sup> *Ibid*.

<sup>102</sup> *Robert B. Gibson, supra* note 91.

## 4.5.2 Strategic Assessment of Climate Change

The final SACC is a product of the comments and discussion concerning the ECCC discussion paper on the objectives and scope of the SACC published on July 19, 2018.<sup>103</sup> The final SACC guides how the “federal impact assessments will consider a project’s GHG emissions.”<sup>104</sup> This is an important step in the implementation of the IAA climate change considerations in the IA process and decision making.

The final SACC provides guidance for designated projects to be assessed under the IAA.<sup>105</sup> To fully apply the SACC to designated projects, the final SACC will be aided by three technical guides, which are “Quantification of GHG emissions; Best Available Technologies / Best Environmental Practices (BAT/BEP); and Climate Change Resilience.”<sup>106</sup> When the technical guides on quantification of GHG emissions are allowed, it will aid the assessment of the net GHG emissions and upstream emissions as it will shed more light on how these will be assessed.<sup>107</sup>

Wright suggests that the final SACC is a strategic assessment in name and not necessarily in substance because it does not “include a comprehensive review of Canada’s existing and future policies, plans and programs with respect to climate change and GHG emissions reductions.”<sup>108</sup>

Canada’s commitment to net-zero carbon emissions by 2050 is an important aspect of the final SACC.<sup>109</sup> This final SACC seeks to achieve net-zero emissions by 2050,<sup>110</sup> which should be stated at the key stages of the IA process, which are the IA phase, the decision making phase, and

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<sup>103</sup> *Environment and Climate Change Canada*, *supra* note 83 at 1.

<sup>104</sup> *Ibid* at 1-3.

<sup>105</sup> *Ibid* at 1.

<sup>106</sup> *Ibid* at 4.

<sup>107</sup> *Ibid* at 4-5.

<sup>108</sup> David V. Wright, *Final Strategic Assessment on Climate Change: Zero Net Effect?* (2020) [unpublished, archived at, University of Calgary Faculty of Law]; Robert Gibson, Karine Péloffy & Meinhard Doelle, “Challenges and Opportunities of a Forthcoming Strategic Assessment of the Implications of International Climate Change Mitigation Commitments for Individual Undertakings in Canada” (2018) 10.10 Sustainability 1-4.

<sup>109</sup> *Environment and Climate Change Canada*, *supra* note 83 at 1; *David V. Wright*, *supra* note 108.

<sup>110</sup> *Environment and Climate Change Canada*, *supra* note 83 at 1; *David V. Wright*, *supra* note 108.

the post-decision phase.<sup>111</sup> At the planning phase, the final SACC requires project proponents “with a lifetime beyond 2050” to “provide a credible plan for the project to achieve net-zero emissions by 2050.”<sup>112</sup> In the impact statement phase, project proponents are required to provide information on GHG emissions, and they are required to provide a plan describing how the project will achieve net-zero emissions by 2050.<sup>113</sup> The plan “will need to demonstrate how the net GHG emission[s]... will equal 0 kt CO<sub>2</sub>e / year by 2050 and thereafter for the remainder of the lifetime of the project.”<sup>114</sup> In the assessment phase, the IAAC or the lifecycle regulator reviews, comment on and complement, the project proponent’s plan to achieve net-zero emissions by 2050 as contained in their impact statements.<sup>115</sup>

Concerning the decision-making phase, the final SACC requires decision-makers to be “provided with analysis, including but not limited to, the project’s GHG emissions in the context of Canada’s emissions targets and forecasts, such as Canada’s ... goal for achieving net-zero emissions by 2050.”<sup>116</sup> The final SACC states that the project approval may include a reporting program where the project proponent with a lifetime beyond 2050 would demonstrate progress towards meeting net-zero emissions by 2050.<sup>117</sup>

In the post-decision phase, project proponents may be required to achieve post-approval conditions. The post-approval conditions may include reporting progress in implementing the plan to reach net-zero emissions by 2050 for projects with a lifetime beyond 2050.<sup>118</sup>

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<sup>111</sup> *Environment and Climate Change Canada*, *supra* note 83 at 10; *David V. Wright*, *supra* note 108.

<sup>112</sup> *Environment and Climate Change Canada*, *supra* note 83 at 11.

<sup>113</sup> *Environment and Climate Change Canada*, *supra* note 83 at 16; *David V. Wright*, *supra* note 108.

<sup>114</sup> *Environment and Climate Change Canada*, *supra* note 83 at 16.

<sup>115</sup> *Ibid.*

<sup>116</sup> *Ibid* at 18.

<sup>117</sup> *Ibid* at 19.

<sup>118</sup> *Ibid* at 19.

#### 4.5.2.1 What Type of Emissions will be Assessed?

Under the IAA and the final SACC, the emissions from a designated project that is likely to be assessed are net GHG emissions and upstream emissions.<sup>119</sup> However, it is expressly stated that the IAA and the final SACC will not assess downstream emissions from any designated project.<sup>120</sup>

The issue of determining what type of emissions to assess comes in the planning phase of the project.<sup>121</sup> It is essential to discuss the scope of net GHG emissions and upstream emissions with emphasis on when and how a designated project will assess these emissions.<sup>122</sup>

##### 4.5.2.1.1 Net GHG Emissions

The net GHG emissions are the base emissions information by proponents of a designated project that falls under the list of designated projects permitted to be assessed under the IAA.<sup>123</sup>

Proponents of designated projects can look at the proposed “*Information Requirements and Time Management Regulations* under the IAA” and the final SACC for the required information for the net GHG emissions.<sup>124</sup>

Net GHG emissions are calculated by adding direct GHG emissions and acquired energy GHG emissions minus the transferred surplus energy GHG emissions, minus CO<sub>2</sub> captured and stored, minus avoided domestic GHG emissions, and minus offset credits.<sup>125</sup> The chart below demonstrates the net GHG emissions calculation.

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<sup>119</sup> *Environment and Climate Change Canada*, *supra* note 83 at 5.

<sup>120</sup> *Ibid.*

<sup>121</sup> *Ibid* at 10.

<sup>122</sup> *Ibid* at 6-11.

<sup>123</sup> *Physical Activities Regulations*, *supra* note 32.

<sup>124</sup> See *Environment and Climate Change Canada*, *supra* note 83 at 5; and *Information Requirements and Time Management Regulations*, SOR/2019-283 (2019).

<sup>125</sup> *Environment and Climate Change Canada*, *supra* note 83 at 5.

## Figure 4-1: Net GHG Emissions Equation<sup>126</sup>

### Equation 1: Net GHG emissions

$$\begin{aligned} \text{Net GHG emissions} = & \\ & \text{Direct GHG emissions} \\ & + \text{Acquired energy GHG emissions} \\ & - \text{CO}_2 \text{ captured and stored} \\ & - \text{Avoided domestic GHG emissions} \\ & - \text{Offset credits} \end{aligned}$$

Proponents of the project are required to provide an initial estimate of the net GHG emissions based on available information.<sup>127</sup>

According to the final SACC, direct GHG emissions are GHG emissions that are generated by activities that are within the defined scope of the project. For example, emissions from land clearing, mobile combustion, stationary combustion, industrial process and emissions from flaring, venting and fugitive emissions.<sup>128</sup> The final SACC defines acquired energy GHG as “GHG emissions associated with the generation of electricity, heat, steam or cooling, purchased or acquired from a third party for the project.”<sup>129</sup> Also, the final SACC defines transferred surplus energy GHG as GHG emissions within Canada that are “associated with surplus heat, steam or electricity sold or transferred outside the project boundary.”<sup>130</sup> Furthermore, the final SACC defines CO<sub>2</sub> captured and stored emissions as:<sup>131</sup>

emissions that are generated by the project and permanently stored in a storage project that meets the following criteria: the geological site into which the CO<sub>2</sub> is

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<sup>126</sup> *Ibid* at 5.

<sup>127</sup> *Ibid*.

<sup>128</sup> *Ibid* at 5-6.

<sup>129</sup> *Ibid* at 6.

<sup>130</sup> *Ibid*.

<sup>131</sup> *Ibid*.

injected is a deep saline aquifer for the sole purpose of storage of CO<sub>2</sub>, or a depleted oil reservoir for the purpose of enhanced oil recovery; and the quantity of CO<sub>2</sub> stored for the purposes of the project is captured, transported and stored in accordance with the laws applicable to Canada or a province or applicable to the United States or one of its states.

Also, the final SACC defines avoided domestic GHG emissions as:<sup>132</sup>

GHG emissions that are reduced or eliminated elsewhere in Canada as a result of the project. Avoided emissions must occur within Canada and be: under the control of the proponent; or committed by the owner of the avoided emissions via an agreement with the proponent. The commitment must state that the emissions will be reduced or eliminated as a result of the project.

#### **4.5.2.1.2 Upstream Emissions**

The final SACC sets out the requirements for estimating upstream GHG emissions.<sup>133</sup>

Upstream emissions are “emissions from all stages of production, from the point of resource extraction or utilization to the project under review.”<sup>134</sup> There are two parts to upstream emissions, which are a quantitative estimate of upstream GHG emissions and the qualitative estimate.<sup>135</sup>

The quantitative estimate is based on the maximum emissions output from the designated project at initial development or an estimate of emissions from a replacement or expansion of a

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<sup>132</sup> *Ibid.*

<sup>133</sup> *Ibid at 8.*

<sup>134</sup> *Ibid.*

<sup>135</sup> *Ibid.*

project.<sup>136</sup> While the qualitative estimate is any increase in emissions from the quantitative estimate.<sup>137</sup>

It is essential to note that not all designated projects will have the upstream GHG emissions assessed. The final SACC states that only projects that exceed the upstream GHG threshold will require an upstream assessment. The final SACC restricts the upstream reporting requirements in the first ten years of a project on route to 2050.<sup>138</sup> The upstream GHG emissions threshold reduces over time. The threshold from years 2020-2029 is 500 kt CO<sub>2</sub>e, from 2030-2039 is 300 kt CO<sub>2</sub>e, from 2040-2049 is 200 kt CO<sub>2</sub>e, and 2050-beyond is 100 kt CO<sub>2</sub>e.<sup>139</sup> The threshold is outlined below. This means that projects that have an upstream GHG emission below 500 kt CO<sub>2</sub>e will not have upstream GHG assessments, but in the coming years, the threshold reduces, and more projects will have upstream emissions as a consideration in the project’s EA process.

**Figure 4-2: Upstream GHG Emissions Thresholds for Conducting an Upstream GHG Assessment<sup>140</sup>**

PUBLICATION YEAR OF TAILORED IMPACT STATEMENT GUIDELINES	UPSTREAM GHG THRESHOLD (KT CO <sub>2</sub> eq/YEAR)
2020-2029	500
2030-2039	300
2040-2049	200
2050 and beyond	100

#### 4.5.5.2 Comments and Criticisms of the IAA and Final SACC

There are several criticisms of the provisions of climate change as a consideration in the assessment process, which include:

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<sup>136</sup> *Ibid.*

<sup>137</sup> *Ibid.*

<sup>138</sup> *Ibid.*

<sup>139</sup> *Ibid.*

<sup>140</sup> *Ibid.*

1. The effectiveness of section 22 and section 63(e) depends in large part on the terms of the final SACC. However, there have been several criticisms of the final SACC. The first criticism is that the SACC does not provide total clarity with respect to how a project's GHG emissions will be assessed and decided upon in relation to Canada's climate obligations.<sup>141</sup>

2. Also, for the limited number of projects that are assessed, the IAA and the final guidance do not state in clear terms how the assessing Agency and the Minister (or federal Cabinet as the case may be) will determine "the extent to which the designated project will hinder or contribute to" meeting Canada's climate change commitments.<sup>142</sup> One can suggest that there needs to be additional guidance to assist the Agency or the Minister (or federal Cabinet as the case may be) in determining how the designated project will hinder or contribute to Canada meeting its climate change commitments.<sup>143</sup>

3. Another criticism of the IAA and the final SACC provisions of climate change is that the project list does not include all climate-significant projects.

4. Also, the IAA limits the scope of the GHG assessment to upstream emissions.<sup>144</sup> This is particularly important because sections 26(1) and (2) mandates the Agency to use any information available to it to prepare an IA report.<sup>145</sup>

5. The provisions imply that the Agency can only prepare a report of the IA of the designated project based on what is allowed to be reviewed by the act and the final SACC. Thus, one can argue

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<sup>141</sup> David V. Wright, "Draft Strategic Assessment of Climate Change: Big Steps for Impact Assessment, Baby Steps for Climate Change" December 13, 2019, online: ABlawg, [http://ablawg.ca/wp-content/uploads/2019/12/Blog\\_DW\\_SACC.pdf](http://ablawg.ca/wp-content/uploads/2019/12/Blog_DW_SACC.pdf).

<sup>142</sup> *Ibid* at 3-4.

<sup>143</sup> *Ibid*.

<sup>144</sup> Robert B. Gibson, *supra* note 91.

<sup>145</sup> *Impact Assessment Act*, *supra* note 1 at s 26 (1) and (2).



that the hands of the Agency are tied concerning assessing matters like downstream emissions.<sup>146</sup> Exclusion of downstream emissions is not explicitly in the IAA; rather, this delineation is only a product of the final SACC.<sup>147</sup> The final SACC states that downstream emissions will not be assessed. Wright states that “keeping calculations of downstream emissions out of the assessment goes against the fundamental information gathering purpose of project-level assessment.”<sup>148</sup> The exclusion of downstream emissions reduces the information available for the assessment purpose.<sup>149</sup> Perhaps one of the reasons for the exclusion of downstream emissions is the difficulty in the calculation and the issue of GHG double counting.<sup>150</sup> However, it has been suggested that downstream emissions could have been included “with a strong parallel requirement to explain methodological limitations and uncertainties.”<sup>151</sup>

6. The IAA permits the Minister (or federal Cabinet as the case may be) to approve a project based on public interest even if the project negatively impacts Canada’s ability to meet its climate change obligations.<sup>152</sup> Thus, public interest can override the recommendations of the assessment panel on the designated project.<sup>153</sup>

7. On the matter of upstream emissions, the limitation by the final SACC is that it limits the upstream emissions assessment of projects that are likely to be below 500 kt CO<sub>2</sub>e from 2020 to 2029.<sup>154</sup> The threshold reduces over the years, which means more projects will be assessed with

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<sup>146</sup> *Pembina Institute*, “Pembina Institute comments on the draft strategic assessment of climate change” (12 September 2019) at 4, online (pdf): *Pembina Institute* < <https://www.pembina.org/reports/pembina-comments-on-climate-sa-2019-final.pdf>>.

<sup>147</sup> *Ibid.*

<sup>148</sup> *David V. Wright*, *supra* note 141.

<sup>149</sup> *Ibid.*

<sup>150</sup> *Ibid.*

<sup>151</sup> *Ibid.*

<sup>152</sup> *Impact Assessment Act*, *supra* note 1 at 63.

<sup>153</sup> *Ibid.*

<sup>154</sup> *Environment and Climate Change Canada*, *supra* note 83 at 8.

this reduction.<sup>155</sup> However, several small and medium projects will not have the upstream emissions assessed within the period when the threshold is high.<sup>156</sup>

The importance of having upstream emissions assessed among other reasons is for information, data assessment as to Canada's GHG targets, and to provide a more complete perspective for assessors and the Minister (or federal Cabinet as the case may be) to look at the cost and benefits when assessing the designated project.<sup>157</sup>

8. Ultimately the final decision that rests upon the Minister (or federal Cabinet as the case may be)<sup>158</sup> shows that the matter of GHG emissions and climate change assessment will be on a case by case basis.<sup>159</sup> However, a trend that may occur under this act with regards to the climate considerations in the assessment process is that one might see several court challenges on the assessment of this issue. Wright argues on the matter of judicial review, and standard of review, that in such situations, “the court is going to be sympathetic with Cabinet wrestling with climate plus considerations like the economy.”<sup>160</sup>

#### **4.6 Energy Projects Under the Impact Assessment Act 2019**

Due to the novel nature of the IAA, there have been only a limited number of projects thus far. Thus, to understand how the IAA will assess GHG emissions during a review of an energy project, this section will discuss the Gazoduq Project.<sup>161</sup>

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<sup>155</sup> *Ibid.*

<sup>156</sup> *Ibid.*

<sup>157</sup> *David V. Wright, supra* note 141.

<sup>158</sup> *Ibid.*

<sup>159</sup> *Ibid.*

<sup>160</sup> John Geddes, “Maybe a new pipeline could win federal approval after all” (1 November 2019), online: *Maclean's* <<https://www.macleans.ca/politics/ottawa/maybe-a-new-pipeline-could-win-federal-approval-after-all/>>.

<sup>161</sup> Impact Assessment Agency of Canada, “Gazoduq Project” (last visited 15 February 2020), online: *Government of Canada* <<https://iaac-aeic.gc.ca/050/evaluations/proj/80264?culture=en-CA>>

The proponent of the Gazoduq Project is Gazoduq Inc.<sup>162</sup> The proponent plans to construct a natural gas pipeline between northeastern Ontario and Saguenay, Quebec.<sup>163</sup> The proposed pipeline, when completed, will connect TC Energy’s gas transmission system in Ontario to a proposed natural gas liquefaction facility by GNL Québec in Saguenay Québec.<sup>164</sup> The proposed natural gas pipeline is 780 km long, running through northern Ontario, Abitibi-Témiscamingue, Mauricie and Saguenay-Lac-Saint-Jean.<sup>165</sup> The designated project consists of three compressor stations, one metering station, approximately 25 block valves and a dedicated control centre.<sup>166</sup>

Although the project is not an oil project but a natural gas pipeline project, it is important to consider this project as it will also have an impact on Canada’s GHGs.<sup>167</sup> Also, it will be of great importance to examine whether the Agency will consider upstream emissions. One can presume that there are no plans to assess downstream emissions from the Gazoduq Project due to the scope of emissions that are considered in the IAA as contained in the SACC.

The proponents of the Gazoduq Project have published the project description summary at the time of writing this thesis, the planning phase has been concluded, and the CER has issued a notice of the commencement of the impact assessment.<sup>168</sup> The project description summary

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<sup>162</sup> Gazoduq Inc., “Gazoduq Project Detailed Project Description – Summary” (last visited 15 February 2020), at 7, online(pdf): *Impact Assessment Agency of Canada* <<https://iaac-aeic.gc.ca/050/documents/p80264/133666E.pdf>>.

<sup>163</sup> *Ibid.*

<sup>164</sup> *Ibid.*

<sup>165</sup> *Ibid.*

<sup>166</sup> *Impact Assessment Agency of Canada*, *supra* note 1.

<sup>167</sup> Although LNG contributes less to GHG than coal and oil but still, it produces GHG in all stages of its production and use. See “How does Canadian LNG stack up versus coal for GHGs?” (15 May 2019), online: *Context Energy Examined* <[https://context.capp.ca/infographics/2019/infographic\\_canadian-lng-vs-coal](https://context.capp.ca/infographics/2019/infographic_canadian-lng-vs-coal)> and American Petroleum Institute, “Consistent Methodology for estimating Greenhouse Gas Emission” (2015) at 9-11, online (pdf): *American Petroleum Institute* <<https://www.api.org/~media/Files/EHS/climate-change/api-lng-ghg-emissions-guidelines-05-2015.pdf>>.

<sup>168</sup> *Impact Assessment Agency of Canada*, *supra* note 1; Canadian Energy Regulator, “Gazoduq Project update: Notice of the commencement of the impact assessment” (17 July 2020), online: *Canada Energy Regulator* <<https://www.cer-rec.gc.ca/bts/nws/whtnw/2020/2020-07-17-eng.html>>.

contains details of the project, particularly the description of the project, purpose and then GHG effects from the project.<sup>169</sup>

The Gazoduq Project will add to the transmission of 51 million cubic meters (1.8 billion cubic feet) of natural gas per day.<sup>170</sup> The project emits GHGs at several stages of the designated project.<sup>171</sup> GHG emissions from diesel fuel will be emitted during construction and transportation activities. The designated project compressor stations will use natural gas-powered turbines as the main source of GHG emissions.<sup>172</sup> There is the likelihood that natural gas purges/venting and fugitive emissions from the designated project could contribute to GHG emissions.<sup>173</sup>

The project has three compression stations.<sup>174</sup> The first is located near Ramore, Ontario, the second is located near La Corne, Québec, and the third is near Lac Ashuapmushuan, Québec.<sup>175</sup> The proponent presented information for GHG emissions from the project.<sup>176</sup> The emissions data depends on whether the electric compressors will be utilized in the operation of the project.<sup>177</sup> Although the proponents intend that the La Corne compressor would operate exclusively on electricity, they presented the GHG emissions calculation based on the compressors run exclusively on natural gas.<sup>178</sup> If the compressors run with part electric driven compressors and part natural gas compressors, the direct GHG emissions will be 165 kT of CO<sub>2</sub> per operational year and the acquired GHG emissions from the purchase of electricity is estimated at 2 kT of CO<sub>2</sub> per operational year.<sup>179</sup> However, if the compressors are to run solely on natural gas, the estimated

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<sup>169</sup> *Gazoduq Inc.*, *supra* note 162 at 7-47.

<sup>170</sup> *Ibid* at 9.

<sup>171</sup> *Ibid* at 28.

<sup>172</sup> *Ibid*.

<sup>173</sup> *Ibid*.

<sup>174</sup> *Ibid* at 9.

<sup>175</sup> *Ibid* at 9.

<sup>176</sup> *Ibid* at 29.

<sup>177</sup> *Ibid*.

<sup>178</sup> *Ibid*.

<sup>179</sup> *Ibid*.

GHG emissions will be approximately 320 kT of CO<sub>2</sub> per operational year and acquired GHG emissions from the purchase of electricity is estimated at 15 tonnes of CO<sub>2</sub> equivalent per operational year.<sup>180</sup>

The project falls in the list of designated projects to be assessed under the IAA according to sections 37(d),<sup>181</sup> and 41<sup>182</sup> of the *Physical Activities Regulations* under the IAA.<sup>183</sup> Therefore, the procedure for IA highlighted above must be followed before the Minister (or federal Cabinet, as the case may be) makes a final decision<sup>184</sup> on whether the project is in the public interest.<sup>185</sup>

Its construction may release atmospheric emissions like sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and carbon dioxide (CO<sub>2</sub>).<sup>186</sup> The project also expects emissions to be generated from the processing of natural gas.<sup>187</sup>

The implication is that it will contribute to GHGs and affect Canada's ability to meet its climate change commitments in some manner.

On January 22, 2020, the Agency decided that the proposed Gazoduq Project requires an IA.<sup>188</sup> Based on the requirements of the planning phase of the IA, the Agency released the draft Tailored Impact Statement Guidelines and the draft Public Participation Plan.<sup>189</sup> Under the draft

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<sup>180</sup> *Ibid.*

<sup>181</sup> *Ibid* at note s 37(d).

<sup>182</sup> *Ibid* at note s 41.

<sup>183</sup> *Physical Activities Regulations*, *supra* note 32.

<sup>184</sup> *Impact Assessment Act*, *supra* note 1 at s 63.

<sup>185</sup> *Ibid.*

<sup>186</sup> *Gazoduq Inc.*, *supra* note 162 at 30-31.

<sup>187</sup> *Ibid.*

<sup>188</sup> Canada Energy Regulator, "Gazoduq Project – Public Comments Invited" (30 January 2020), online: *Government of Canada* < <https://www.cer-rec.gc.ca/bts/nws/whtnw/2020/2020-01-30-eng.html>>.

<sup>189</sup> *Ibid.*

Tailored Impact Statement Guidelines,<sup>190</sup> the Agency released several requirements based on the final SACC, which guides how climate change should be assessed during the IA process.<sup>191</sup>

Some of the factors the IA should consider concerning climate change are the annual estimate of GHG emissions; the quantitative estimate of net GHG emissions; how the designated project can contribute or hinder Canada's efforts to reduce GHG emissions; how the designated project could impact global GHG emissions; and an assessment of the GHG emissions upstream of the project.<sup>192</sup>

The project proponent argues that the designated project will reduce GHGs because natural gas emits less GHGs than coal, which is a major pollutant.<sup>193</sup> The proponent states that the natural gas produced will be transported to Asia and Europe to displace coal and oil.<sup>194</sup> It also states that the project will aid in promoting a cleaner-burning fossil fuel, and position Canada as a global leader in climate change.<sup>195</sup>

The proponent argues that the project is in the public interest.<sup>196</sup> However, it is the Minister (or federal Cabinet, as the case may be) that determines whether a project is in the public interest.<sup>197</sup> Therefore the Minister (or federal Cabinet as the case may be) can allow the project on the basis that it passes the public interest test.<sup>198</sup> The Minister (or federal Cabinet, as the case may be) must

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<sup>190</sup> Impact Assessment Agency of Canada, "Gazoduq Project- Tailored Environmental Impact Statement Guidelines Pursuant to the Impact Assessment Act and the Canadian Energy Regulator Act" (30 January 2020) at 1-170, online (pdf): *Impact Assessment Agency of Canada* < <https://iaac-aeic.gc.ca/050/documents/p80264/133758E.pdf>>.

<sup>191</sup> *Ibid* at 72-73.

<sup>192</sup> *Ibid*.

<sup>193</sup> *Gazoduq Inc.*, *supra* note 162 at 8-9.

<sup>194</sup> *Ibid*.

<sup>195</sup> *Ibid*.

<sup>196</sup> *Ibid*.

<sup>197</sup> *Impact Assessment Act*, *supra* note 1 at s 63 (e).

<sup>198</sup> *Ibid*.

weigh whether the project is in the public interest while considering how the project will contribute or hinder Canada's climate change obligations.<sup>199</sup>

The proponent also provides details of the projected emissions from the project, which is in line with section 23 of the *Guide to Preparing an Initial Project Description, and a Detailed Project Description*. Section 23 mandates that the project description should provide an estimate of GHGs from the designated project.<sup>200</sup> The guidance on how to calculate the net GHG emissions is contained in the final SACC.<sup>201</sup> Thus, one can submit that the description of the net GHG emissions from the Gazoduq Project is sufficient for the Agency to conduct a comprehensive IA, and this is a factor that was taken into consideration by the Agency when they decided to approve the project for IA.<sup>202</sup>

The question of whether the assessment phase of the Gazoduq Project will include a review of upstream emissions will depend on whether the upstream GHG emissions from the project are likely to be below 500 kt CO<sub>2</sub>e per year. If it is below the threshold, then upstream GHG emissions will not be assessed.<sup>203</sup> More importantly, the final SACC requires the project proponent to provide a plan describing how the project will achieve net-zero emissions by 2050.<sup>204</sup>

#### **4.7 The Role of the IAA in Achieving Canada's Paris Agreement Goals**

An important purpose of IA is to provide the assessing agency with information that will inform the decision on whether a project should be approved or not.<sup>205</sup> IA predicts the impact of

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<sup>199</sup> *Ibid.*

<sup>200</sup> Practitioner's Guide to the Impact Assessment Act, "Guide to Preparing an Initial Project Description and a Detailed Project Description" (last visited 10 December 2019), online: *Government of Canada* <[https://www.canada.ca/en/impact-assessment-Agency/services/policy-guidance/practitioners-guide-impact-assessment-act/guide-preparing-project-description-detailed-project-description.html#\\_Toc17794714](https://www.canada.ca/en/impact-assessment-Agency/services/policy-guidance/practitioners-guide-impact-assessment-act/guide-preparing-project-description-detailed-project-description.html#_Toc17794714)>.

<sup>201</sup> *Environment and Climate Change Canada*, *supra* note 83 at 5.

<sup>202</sup> *Impact Assessment Agency of Canada*, *supra* note 1.

<sup>203</sup> *Ibid* at 63.

<sup>204</sup> *Environment and Climate Change Canada*, *supra* note 83 at 16; *David V. Wright*, *supra* note 108.

<sup>205</sup> David V. Wright & Meinhard Doelle, "Social Cost of Carbon in Environmental Impact Assessment" (2019) 52:3 *UBC Law Review* 1007 at 13.

projects on the environment, and the more information provided by proponents of a project on its projected impacts, the better the adaptation and mitigation measures.<sup>206</sup> *Oldman River Society v. Canada*, the SCC stated that “[e]nvironmental impact assessment is, in its simplest form, a planning tool... As a planning tool, it has both an information gathering and decision-making component which provide the decision-maker with an objective basis for granting or denying approval of a proposed development.”<sup>207</sup> Information gathering is key in actualizing Canada’s climate goals.<sup>208</sup>

It is important to stay on the side of gathering information because it allows the Agency and the Minister (or federal Cabinet as the case may be) to abide by scientific principles and also understand the implication on the project on Canada’s climate goals.<sup>209</sup>

In order to adequately plan and achieve decarbonization, it is important to have adequate information on GHG emissions from projects and to share this information with stakeholders and the public.<sup>210</sup> This information includes the projected life cycle emissions from a designated project. Such information will aid the government in understanding Canada’s progression in attaining the *Paris Agreement* targets.<sup>211</sup>

Doelle states several requirements that a project’s information should have to help understand Canada’s progress in attaining its climate change targets.<sup>212</sup> The information should include the project’s direct life cycle GHG emissions and indirect emissions in Canada. It should

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<sup>206</sup> *Ibid.*

<sup>207</sup> *Friends of the Oldman River Society v. Canada*, [1992] 1 SCR 3; *David V. Wright & Meinhard Doelle*, *supra* note 205 at 13.

<sup>208</sup> *David V. Wright & Meinhard Doelle*, *supra* note 205 at 13.

<sup>209</sup> Meinhard Doelle, “Integrating Climate Change into Environmental Impact Assessments: Key Design Elements”, (26 October 2018) at 5-6, online (pdf): SSRN <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3273499](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3273499)> .

<sup>210</sup> *Ibid.*

<sup>211</sup> *Ibid* at 12-13; “Paris Agreement”, 12 December 2015, FCCC/CP/2015/L.9/Rev.1 (entered into force 29 January 2016) (hereafter ‘Paris Agreement’).

<sup>212</sup> *Meinhard Doelle*, *supra* note 209 at 12-13.



also include the project's impact on emissions in Canada and internationally, alternatives to the project.<sup>213</sup>

Doelle states that the information will aid in answering some fundamental questions.<sup>214</sup> Some of these include if the project is in line with Canada's NDC and long-term climate plans and if the project will hinder Canada's ability to increase its NDC.<sup>215</sup> Furthermore, if the project will hinder or aid Canada's efforts to meet its target to reduce emissions by 2030 and 2040 and if the project's life cycle emissions will aid or hinder efforts to reach full decarbonization before 2050.<sup>216</sup>

Under the IAA, there are three phases of IA, the planning phase, the assessment process, and the decision making phase.<sup>217</sup> The purpose of the planning phase is to determine the viability of a designated project. In the planning phase under the IAA, the proponent submits the initial and final project description to the Agency.<sup>218</sup> The details to be present in the initial and final project description are contained in the *Information and Management of Time Limits Regulations*.<sup>219</sup> Proponents are to include information required by the final SACC in the project description. The final SACC provides guidance on how GHG emissions will be considered in the IA process.<sup>220</sup>

One of the details to be included in the project description is the estimate of any GHG emissions associated with the project, which should be calculated as the net GHG emissions.<sup>221</sup>

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<sup>213</sup> *Ibid*

<sup>214</sup> *Ibid*

<sup>215</sup> *Ibid*

<sup>216</sup> *Ibid*

<sup>217</sup> *Impact Assessment Act*, *supra* note 1.

<sup>218</sup> *Meinhard Doelle & Chris Tollefson*, *supra* note 46 at 615; *Kai Alderson et al*, *supra* note 9.

<sup>219</sup> *Meinhard Doelle & Chris Tollefson*, *supra* note 46 at 615; *Kai Alderson et al*, *supra* note 9; *Impact Assessment Act*, *supra* note 1 at s 10(1).

<sup>220</sup> *Environment and Climate Change Canada*, *supra* note 83 at 1.

<sup>221</sup> *Environment and Climate Change Canada*, *supra* note 83 at 5; and *Information Requirements and Time Management Regulations*, *supra* note 124.

The information from the project description aids the Agency to decide on the viability of the project based on several factors contained in section 22(1)(i). One of these main factors is how the project affects Canada's climate change obligations.<sup>222</sup>

The project proponent is expected to provide climate change-related information in their impact statements to the Agency.<sup>223</sup>

The proponent of the project is expected to include a description of the project's main sources of GHG emissions and the estimated annual GHG emissions over the lifetime of the project, the net GHG emissions, and emission intensity for each year of the operation phase of the project.<sup>224</sup>

The proponents must include in the impact statement mitigation measures to minimize GHG emissions in all phases of the project. They are to include BAT/BEP Determination for their project.<sup>225</sup>

Proponents are required to provide information on the project's resilience to climate change.<sup>226</sup> They are required to provide upstream GHG emissions information that is greater than or equal to the upstream GHG emissions threshold, which is 500 kt CO<sub>2</sub>e of upstream GHG emissions from 2020-2029, with a reduction of the threshold until 2050 and beyond.<sup>227</sup> Finally, the proponent is to include a plan to achieve net-zero emissions by 2050 for projects with a lifetime beyond 2050 in order for the project to be able to achieve net-zero emissions.<sup>228</sup>

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<sup>222</sup> *Impact Assessment Act*, *supra* note 1 at 21(1)(i).

<sup>223</sup> *Environment and Climate Change Canada*, *supra* note 83 at 17.

<sup>224</sup> *Ibid* at 12.

<sup>225</sup> *Ibid* at 13.

<sup>226</sup> *Ibid* at 16.

<sup>227</sup> *Ibid* at 8.

<sup>228</sup> *Ibid* at 17

The decision making by the Minister (or federal Cabinet as the case may be) is based on a set of factors, one of which is Canada's climate change obligations.<sup>229</sup>

The IAA and the final SACC state various climate change related information to be included in the project description and impact statement. There are no provisions on how Canada seeks to use the information gathered to achieve its *Paris Agreement* targets.<sup>230</sup> There seems to exist a gap in the IA process and the actualization of the Paris goals. One can argue that the IAA and final SACC takes a narrow approach in using this information. Thus, it might not be utilizing the full potential of the information gathered.

Concerning Doelle's questions relating to the GHG information expected from the project, the IAA and final SACC requires the net GHG emissions, upstream GHG emissions, and emissions from the life-cycle of the project, among other requirements.<sup>231</sup> This information is important, but downstream emissions are excluded in the quantification of GHGs, which means that the scope of GHGs to be assessed in a project is incomplete.<sup>232</sup> Although there are arguable grounds for not considering downstream emissions, having the total emissions from a project will aid in information gathering.<sup>233</sup> The total climate-related information from a project helps Canada keep track of its progress towards the Paris goals. In contrast, incomplete information can hinder Canada meeting its Paris commitments and its targets towards decarbonization.<sup>234</sup>

It is important to understand Canada's progression in achieving its Paris targets. Canada implements its climate plans and strategy to meet its Paris goals, as stated in the Pan-Canadian

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<sup>229</sup> *Impact Assessment Act*, *supra* note 1 at s 63.

<sup>230</sup> *David V. Wright*, *supra* note 141.

<sup>231</sup> *Meinhard Doelle*, *supra* note 209 at 8.

<sup>232</sup> *David V. Wright*, *supra* note 141.

<sup>233</sup> *Ibid.*

<sup>234</sup> *Meinhard Doelle*, *supra* note 209 at 12-13.

Framework on Clean Growth and Climate Change (the Pan-Canadian Framework).<sup>235</sup> The Pan-Canadian Framework is a roadmap to meet Canada’s emissions reduction targets, grow the economy, and build resilience to a changing climate.<sup>236</sup> It seeks to reduce GHGs in all sectors, including the oil and gas sector, and to transform Canada into a low-carbon economy.<sup>237</sup>

Canada submits its National GHG Inventory to the UNFCCC by April 15 of each year in accordance with the UNFCCC Reporting Guidelines.<sup>238</sup> This report provides Canada’s performance as to reducing GHGs and achieving its 2020 and 2030 climate change mitigation targets.<sup>239</sup> Currently, Canada states it is on the path to meet the “*Paris Agreement* GHG emissions reduction target of 30% below 2005 levels by 2030. Canada’s most recent GHG emissions projections estimate that Canada’s GHG emissions in 2030 will be 227 million tonnes lower than projected prior to the Pan-Canadian Framework or 19% below 2005 levels.”<sup>240</sup> Canada’s progression is stated below.

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<sup>235</sup> “Pan-Canadian Framework on Clean Growth and Climate Change”, (last visited 9 December 2019), online: <https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework/climate-change-plan.html>>.

<sup>236</sup> *Ibid.*

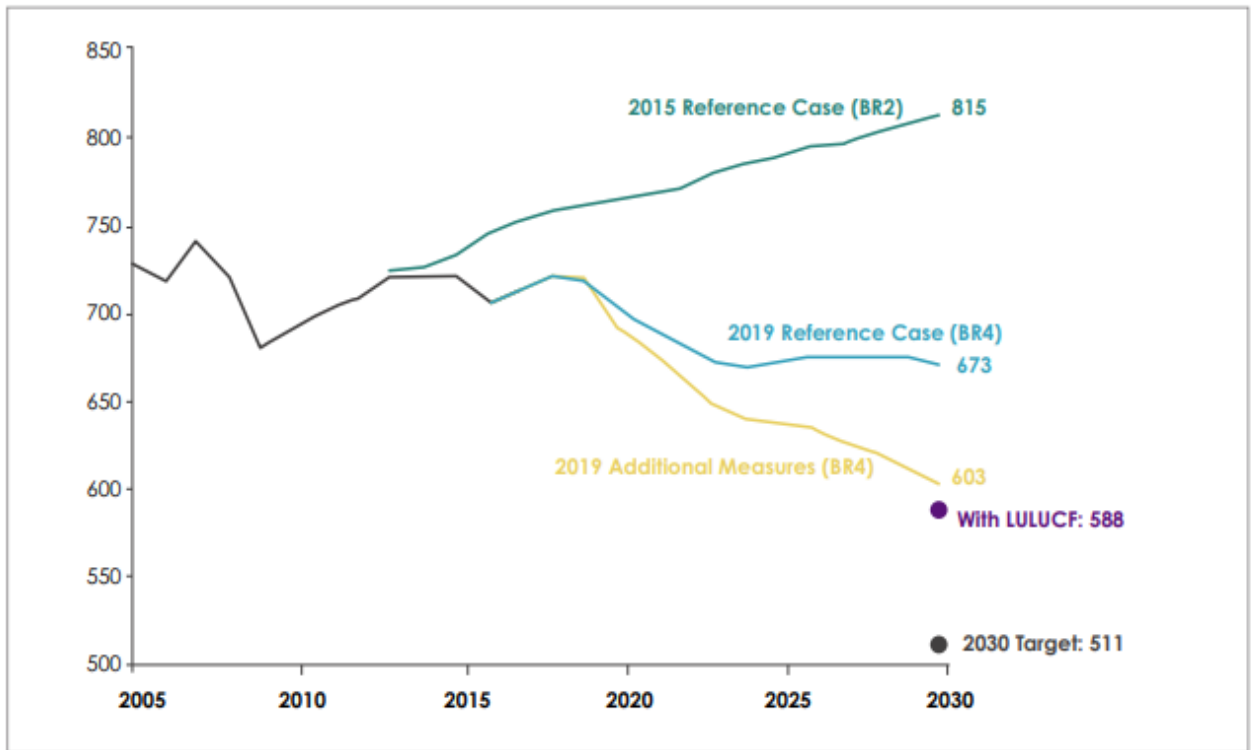
<sup>237</sup> Pan-Canadian Framework on Clean Growth and Climate Change, “Complementary actions to reduce emissions”, (last visited 9 December 2019), online: *Government of Canada* <[https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework/complementary-actions-reduce-emissions.html#3\\_4](https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework/complementary-actions-reduce-emissions.html#3_4)>.

<sup>238</sup> Canada’s 4th Biennial Report to the United Nations Framework Convention on Climate Change (UNFCCC) at 3 <[https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/1687459\\_Canada-BR4-1-Canada%E2%80%99s%20Fourth%20Biennial%20Report%20on%20Climate%20Change%202019.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/1687459_Canada-BR4-1-Canada%E2%80%99s%20Fourth%20Biennial%20Report%20on%20Climate%20Change%202019.pdf)>.

<sup>239</sup> *Ibid* at 2.

<sup>240</sup> *Ibid* at 1.

**Figure 4-3: Scenarios of Canadian Emissions to 2030 (Mt CO<sub>2</sub> eq)<sup>241</sup>**



**Figure 5.2: Scenarios of Canadian Emissions to 2030 (Mt CO<sub>2</sub> eq)**

Concerning emissions reduction, the report states that there has been a reduction of emissions of 15 Mt (4%) in stationary combustion sources and 5 MT (9%) in fugitive sources from 2005-2017.<sup>242</sup> Canada credits several federal and provincial measures for the reduction of GHGs in the energy sector, like the implementation of carbon pricing in 2018 through the *Greenhouse Gas Pollution Pricing Act*.<sup>243</sup> The reduction of emissions in the energy sector is being actualized by the federal regulations to phase-out coal-fired electricity by 2030 and the new federal regulations to reduce methane emissions.<sup>244</sup>

<sup>241</sup> *Ibid* at 28.

<sup>242</sup> *Ibid* at 3.

<sup>243</sup> *Ibid* at 2.

<sup>244</sup> *Ibid*.

However, some have disagreed with Canada's positive progression towards the *Paris Agreement* targets as there is still "a gap of 79 million tonnes of GHGs between our 2030 target emissions and the levels Canada is on track to achieve."<sup>245</sup> Thus, it is unlikely to meet the 1.5°C limit global warming goal with the current target.<sup>246</sup>

Therefore it is important for Canada to utilize all measures available to reduce GHGs and meet its Paris targets.<sup>247</sup> Some of the measures include the stabilization wedges,<sup>248</sup> pathway developments, carbon budgeting, economic and regulatory tools, and long-range policies.<sup>249</sup> Two of the list important to our discussion is carbon budgeting and economic and regulatory tools like the IA process.<sup>250</sup> To meet the *Paris Agreement* targets, Canada must plan and determine the overall GHG budget based on a sector-based allocation of GHGs.<sup>251</sup> To achieve carbon budgeting, Canada must obtain GHG information accurately for better planning, including information on GHG emissions from energy project development and the IA process.<sup>252</sup> Concerning regulatory tools as a measure to reduce carbon emissions, Canada needs to calculate the costs of GHGs to be emitted from proposed energy projects based on an allowance under a carbon budget, the expectation of

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<sup>245</sup> "Getting Real about Canada's Climate Plan" (last visited 26 July 2020) at 2-3, online (pdf): *Climate Action Network* <[https://climateactionnetwork.ca/wp-content/uploads/2019/06/CAN-RAC\\_ClimatePlanExpectations\\_EN-1.pdf](https://climateactionnetwork.ca/wp-content/uploads/2019/06/CAN-RAC_ClimatePlanExpectations_EN-1.pdf)>.

<sup>246</sup> *Ibid.*

<sup>247</sup> Robert B. Gibson et al., "From Paris to Projects Clarifying the implications of Canada's climate change mitigation commitments for the planning and assessment of projects and strategic undertakings" (January 2019) at 13, online (pdf): *Metcalf Foundation* <[https://metcalfoundation.com/site/uploads/2019/01/Metcalf\\_SReport-19-01-2019\\_CMYK.pdf](https://metcalfoundation.com/site/uploads/2019/01/Metcalf_SReport-19-01-2019_CMYK.pdf)>.

<sup>248</sup> Pacala, S. & R. Socolow, "Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies" (2004) 305:5686 *Science* 968-72 <<https://go-gale-com.ezproxy.lib.ucalgary.ca/ps/i.do?p=AONE&u=ucalgary&id=GALE%7CA121417118&v=2.1&it=r>>.

<sup>249</sup> *Robert B. Gibson et al., supra note 247 at 13-19.*

<sup>250</sup> *Ibid* at 18-19.

<sup>251</sup> *Ibid* at 18.

<sup>252</sup> *Ibid.*

decarbonization, and the costs of stranded assets.<sup>253</sup> To achieve this goal, information from the IA process is important. The IAA is a step in the right direction, but more can be done.<sup>254</sup>

#### **4.8 Conclusion**

An examination of the provisions of the IAA as it pertains to the requirement of GHGs, particularly upstream and downstream emissions in the IA process of a designated project, shows that the IAA has taken a different direction from the CEAA 2012. There is an express provision to ensure that GHG emission is a factor in assessing a designated project. However, concerning upstream and downstream emissions, the IAA only requires upstream emissions to be considered in the assessment process of a designated project when it crosses the threshold of 500 kt CO<sub>2</sub>e for the first few years and a reduction of the threshold till 2050 and beyond. Still, downstream emissions will not be considered in the assessment process of a designated project under the IAA.

The IAA provisions requiring consideration of GHGs indicate that although the IAA is a development from the CEAA 2012 on GHGs, the limiting of upstream emissions and the total exclusion of downstream emissions limits the overall information required to understand how energy projects will impact the climate change obligations of Canada. It suffices to say that more can be done, and the IAA is a step further in the right direction.

To understand how GHGs have been addressed in the environmental assessment processes of comparable legal jurisdictions, the next chapter will examine how upstream and downstream emissions have been considered in the IA process in the U.S.

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<sup>253</sup> *Ibid* at 19.

<sup>254</sup> *Ibid*.

## Chapter 5: Upstream and Downstream Emissions in the EIA Process in the United States of America

### 5.1 Introduction

Previous chapters have established the use of EIA as one of the tools to assess how energy projects contribute to climate change.<sup>1</sup> It has been established in the fourth chapter that, in Canada, upstream emissions are to be considered in the IA or EIA of energy projects, and downstream emissions are not considered in the IA process.<sup>2</sup> The assessment of upstream emissions and the decision not to assess downstream emissions are detailed in the final SACC document, which serves as a guide for assessing climate change in the IA process for a designated project under the IAA.<sup>3</sup> The IAA is Canada's primary federal legal instrument for IA.

Chapter five focuses on whether upstream and downstream emissions are assessed in the EIA process in the U.S. The foremost law concerning EIA in the U.S. is the NEPA,<sup>4</sup> and chapter five examines the provisions of NEPA and other legal instruments closely related to NEPA. The purpose of this chapter is to examine how GHG emissions are considered in the EIA process in the U.S.

The U.S. example will aid in understanding the trends of practices in EIA systems concerning GHG emissions. The U.S. was selected for observation because of its similarities and

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<sup>1</sup> IEMA, "Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance" (last visited 21 February 2020) at 1, *online* (pdf): *International Association of Impact Assessment* <[https://www.iaia.org/pdf/wab/EIA%20Guide\\_GHG%20Assessment%20and%20Significance\\_IEMA\\_16May17.pdf](https://www.iaia.org/pdf/wab/EIA%20Guide_GHG%20Assessment%20and%20Significance_IEMA_16May17.pdf)>

<sup>2</sup> Environment and Climate Change Canada, "Strategic Assessment of Climate Change" (last modified 5 December 2018) at 5, *online* (pdf): *Strategic Assessment of Climate Change* <<https://www.strategicassessmentclimatechange.ca/15112/widgets/61020/documents/36886>>.

<sup>3</sup> *Ibid.*

<sup>4</sup> Michael Burger & Jessica Wentz, "Downstream and Upstream Greenhouse Gas Emissions: The Proper Scope of NEPA Review." (2017) 41:1 *Harvard Environmental Law Review* 112 <<http://columbiaclimatelaw.com/files/2017/05/Burger-Wentz-2017-05-Downstream-and-Upstream-Emissions.pdf>>.



relationship with Canada in terms of environmental agreements, economic agreements, geographical proximity, and oil and gas transactions.

Chapter five explores how NEPA addresses upstream and downstream emissions from energy projects. First, it examines the legal framework of EIA in the U.S, particularly the legal framework of EIA and the agencies in charge of environmental review. This chapter will not delve in-depth into agency-specific requirements as this is out of the purview of this thesis. It will provide an overview of the EIA framework at the federal level. Secondly, it analyses how NEPA and specific federal agencies address upstream and downstream emissions in the environmental review of energy projects, focusing on NEPA's criteria to assess direct, indirect effects and cumulative effects from proposed energy projects. An examination of the agencies' approach to examining upstream and downstream emissions reveals inconsistencies in the analysis by these agencies. It then examines some U.S. case laws and how they have shaped the interpretation of NEPA provisions and the agencies' responsibility in assessing upstream and downstream emissions. An examination of the case law reveals that the courts have decided that upstream and downstream emissions are to be determined in the EIA process under NEPA, as downstream emissions are to be determined as a type of indirect effects that must be evaluated. It concludes with a comparison of how the U.S. and Canada's EIA process consider upstream and downstream emissions. The conclusion here is that the U.S. system can consider upstream and downstream emissions but does not do so as a point of practice. In contrast, the Canadian system does not consider downstream emissions but upstream emissions.

## 5.2 Context and Background of NEPA

NEPA was signed into law on January 1, 1970.<sup>5</sup> It is the foremost EIA law in the U.S.<sup>6</sup> NEPA is responsible for the approvals of permits for energy projects on federal lands.<sup>7</sup>

NEPA mandates federal agencies to assess the environmental effects of major federal actions.<sup>8</sup> Federal agencies are required to evaluate the EIA of proposed energy projects by adhering to NEPA provisions and guidance.<sup>9</sup>

NEPA is divided into two titles. The first title provides for the *Declaration of National Environmental Policy*.<sup>10</sup> NEPA's National Environmental Policy includes making use of practicable means and measures to promote a productive harmony between people and nature and to ensure the preservation and enhancement of the environment.<sup>11</sup> It connotes the protection of the environment and its relationship with people from industrial expansion and resource exploitation.<sup>12</sup> NEPA seeks to carry out the National Environmental Policy by the federal government, reflecting it in the national policy and federal environmental plans and programs.<sup>13</sup>

The federal agencies are to prepare detailed statements on a proposed energy project under the federal jurisdiction.<sup>14</sup> The statement is referred to as Environmental Impact Statements (EIS)

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<sup>5</sup> EPA, "What is the National Environmental Policy Act?" (last visited 21 February 2020), online: *United States Environmental Protection Agency* <<https://www.epa.gov/nepa/what-national-environmental-policy-act>>; 42 USC § 4321.

<sup>6</sup> EPA, *supra* note 5.

<sup>7</sup> *Ibid.*

<sup>8</sup> 42 USC § 4332 s 102.

<sup>9</sup> *Ibid.*

<sup>10</sup> 42 USC § 4331 s 101.

<sup>11</sup> *Ibid.*

<sup>12</sup> *Ibid.*

<sup>13</sup> *Ibid.*

<sup>14</sup> 42 USC § 4332 s 102.

and EA.<sup>15</sup> These statements highlight the environmental impact of a proposed project or action, the adverse environmental effects, and the alternatives to the proposed project or action.<sup>16</sup>

The second title of NEPA establishes the *Council on Environmental Quality* (CEQ),<sup>17</sup> which is responsible for the implementation of EIA in NEPA.<sup>18</sup> The CEQ prepares the Environmental Quality Report, which contains the status of all areas of the environment, the availability of the natural resources, and a review of the federal government's regulatory activity relating to energy resources and energy projects.<sup>19</sup> The CEQ is responsible for developing and recommending to the President national policies to promote environmental quality, such as climate change.<sup>20</sup> The guidance and policy by the CEQ aid the agencies in the EIA process for energy projects, thereby ensuring that federal agencies comply with NEPA provisions.<sup>21</sup> The Office of Environmental Quality, which is headed by the Director, administers the CEQ and works in cooperation with the federal agencies to ensure that federal agencies align with NEPA provisions and federal programs and policies which promote and improve environmental quality.<sup>22</sup>

### **5.3 The Planning, Scoping and Decision-Making Process Under NEPA**

#### **5.3.1 Planning Process**

At this stage of the EIA, the concerned federal agency uses a systematic, interdisciplinary approach to integrate natural and social sciences and environmental design arts in planning and decision-making.<sup>23</sup> The federal agency identifies the environmental effects of the proposed project

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<sup>15</sup> *Ibid.*

<sup>16</sup> *Ibid.*

<sup>17</sup> 42 USC § 4342 s 202.

<sup>18</sup> *Ibid.*

<sup>19</sup> 42 USC § 4341 s 201.

<sup>20</sup> *Ibid* at s 204.

<sup>21</sup> *Ibid.*

<sup>22</sup> 42 USC § 4372.

<sup>23</sup> 40 C.F.R §1501.2

and compares the effects on the economic benefits from the project.<sup>24</sup> The federal agency also examines alternatives to the courses of actions in the project or alternative uses of resources.<sup>25</sup> The information from the preliminary analysis is transmitted to interested parties, and the federal agency consults early with other agencies, Indian tribes, organizations and interested private persons when it deems it necessary for the EIA process.<sup>26</sup>

The federal agencies have the authority to conduct an EIA under NEPA by interpreting the provisions of NEPA as a supplement to its inherent legal authority and provisions under NEPA.<sup>27</sup> Federal agencies have an obligation to ensure that their policies, procedures, and regulations comply with NEPA regulations and guidance to the fullest extent possible except when the federal agency's existing law makes it impossible to align with the NEPA provisions.<sup>28</sup>

The federal agencies develop their individual processes on EIA based on their establishing act and policies. Each agency's regulations depend on the scope of the agency's environmental jurisdiction. The NEPA provisions supplement the agency's provisions, and the agency must take steps to align its regulations with the NEPA provisions.

The federal agency has the choice of drafting three types of documents that signify compliance with NEPA. These documentations are the EIS, EA, and issue a finding of no significant impact (FONSI).<sup>29</sup>

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<sup>24</sup> 40 C.F.R §1501.2

<sup>25</sup> *Ibid.*

<sup>26</sup> *Ibid.*

<sup>27</sup> 40 C.F.R §1500.6

<sup>28</sup> *Ibid.*

<sup>29</sup> 40 C.F.R §1501.4

The federal agency conducting the EIA prepares an EA to determine whether an assessment is necessary for the proposed project.<sup>30</sup> The EA assists the federal agency in planning and decision-making about the project. If the federal agency believes that there is a significant environmental impact from the project, it proceeds to prepare an EIS; if not, it issues a FONSI.<sup>31</sup>

The federal agency determines whether a project requires an EIS if the proposed project usually requires an EIS or the project does not usually require an EIS.<sup>32</sup> If the project usually requires an EIS, the federal agency is mandated to prepare an EIS,<sup>33</sup> and if it is not usually mandated to prepare an EIS, the federal agency is only required to prepare a FONSI based on the EA.<sup>34</sup> Once the federal agency decides that the project requires an EIS, it proceeds to the scoping process of the EIA.<sup>35</sup> The EIS includes the assessment of any environmental impact of the proposed project, adverse effects from the proposed project, alternatives to the project, and irreversible commitments from the project.<sup>36</sup>

### **5.3.2 Scoping**

After preparing the EIS, the federal agency begins the scoping process.<sup>37</sup> The scoping process is to identify significant issues related to a proposed project.<sup>38</sup> The scope of issues is

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<sup>30</sup> 40 C.F.R §1501.3

<sup>31</sup> *Ibid* at 1501.3(E)

<sup>32</sup> 40 C.F.R §1501.4(A)(1)(2)

<sup>33</sup> *Ibid*.

<sup>34</sup> 40 C.F.R §1501.4(E).

<sup>35</sup> “National Environmental Policy Act Review Process” (last visited 14 May 2020), online: *EPA* <<https://www.epa.gov/nepa/national-environmental-policy-act-review-process>>.

<sup>36</sup> *Ibid*.

<sup>37</sup> 40 C.F.R §1501.7

<sup>38</sup> 40 C.F.R. § 1508.25.

provided under CEQ regulations, and federal agencies shall consider three types of actions, three types of alternatives and three types of impacts.<sup>39</sup>

Concerning the actions, the first action is connected actions, which are actions that are closely related and, therefore, should be included in the EIS.<sup>40</sup> Cumulative actions are actions that have cumulatively significant impacts and should be included in the EIS<sup>41</sup> while similar actions are actions that “have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography.”<sup>42</sup>

Concerning alternatives, the three types of alternatives include no action alternative, other reasonable courses of action and mitigation measures (not in the proposed action).<sup>43</sup>

Under the CEQ NEPA regulation, agencies must consider three types of environmental effects when conducting an EIA on proposed energy projects.<sup>44</sup> Federal agencies must consider direct effects, indirect effects, and cumulative effects.<sup>45</sup>

Direct effects are those effects caused by actions that occur at the same time and place.<sup>46</sup> Indirect effects are the effects of the proposed project that are caused by the project at a later time or not closely related to the project but are reasonably foreseeable.<sup>47</sup> An example of an indirect effect is the changes to air, water and other natural systems.<sup>48</sup> While cumulative effects result from

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<sup>39</sup> *Ibid.*

<sup>40</sup> 40 C.F.R § 1508.25 (A)(1).

<sup>41</sup> *Ibid* at 1508.25 (A)(2).

<sup>42</sup> *Ibid* at 1508.25 (A)(3).

<sup>43</sup> *Ibid* at 1508.25 (B).

<sup>44</sup> *Ibid* at 1508.25 (C).

<sup>45</sup> *Ibid.*

<sup>46</sup> *Ibid* at 1508.8 (A).

<sup>47</sup> *Ibid* at 1508.8 (B).

<sup>48</sup> *Ibid.*

the “incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of which agency (federal or non-federal) or person undertakes such other actions.”<sup>49</sup> This thesis will examine the CEQ guidance on GHG consideration to understand how upstream and downstream emissions are considered in the EIS.

### **5.3.3 Decision Making**

The decision-making process can either be by a lead agency, joint lead agencies, and cooperating agency.<sup>50</sup> The lead agency is that agency that has exclusive jurisdiction over the project that is to be assessed.<sup>51</sup> The lead agency must follow the NEPA procedure and NEPA guidance. However, if the project’s EA will require two or more federal agencies to conduct the assessment, the decision-making process will be carried out by joint federal agencies with a lead agency responsible for supervising the environmental analysis.<sup>52</sup> If there exists another federal agency apart from the lead agency that has special expertise on an environmental issue or jurisdiction, the agency can serve as a cooperating agency to assist the lead agency in NEPA scoping process to prepare the environmental analysis.<sup>53</sup>

## **5.4 Federal Statistics of Upstream and Downstream Emissions**

To understand how the federal agencies in the U.S. assess GHGs and especially upstream and downstream emissions, the Sabin Center of climate change survey on federal EIS from July 2012 to December 2014 provides a detailed analysis of federal EA procedure assessment of GHG

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<sup>49</sup> 40 C.F.R §1508.7

<sup>50</sup> *EPA*, *supra* note 5.

<sup>51</sup> *Ibid.*

<sup>52</sup> *Ibid.*

<sup>53</sup> *Ibid.*

emissions.<sup>54</sup> The survey analyzes twelve types of projects, and the projects to be discussed in this section are fossil fuel projects.<sup>55</sup>

The survey analyzes 238 federal EISs and 214 of those assessed in some way GHG emissions and climate change impacts from the project. One hundred seventy-two projects discussed GHG emissions, and 167 projects considered the climate change effects.<sup>56</sup>

Concerning projects relating to fossil fuel extraction and transportation, including pipelines, the survey analyzed 19 projects EISs, and out of the 19 projects, there are were three EISs that assessed lifecycle GHG emissions.<sup>57</sup> The 19 projects analyzed included seven by the Federal Energy Regulatory Commission (FERC), four by the U.S. Forest Service (USFS), four by the Bureau of Ocean and Energy Management (BOEM), one by the Bureau of Land Management (BLM), and one by the United States Fish and Wildlife Service (USFWS).<sup>58</sup>

These 19 fossil fuel projects considered in their EIS the GHG emissions from the project.<sup>59</sup> All of the projects considered emissions from fugitive and vented emissions from oil and gas pipelines and GHG emissions from fossil fuel extraction and transportation.<sup>60</sup> However, the federal agencies viewed these emissions as insignificant compared to the national GHG emissions quota.<sup>61</sup>

Concerning indirect emissions, over half (58%) of the projects assessed the indirect emissions and 25% of the projects provided in their EIS, a quantitative projection of downstream

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<sup>54</sup> Wentz, Jessica A., Glovin, Grant, and Ang, Adrian, "Survey of Climate Change Considerations in Federal Environmental Impact Statements, 2012-2014" (2016) at I, online (pdf): *Sabin Center for Climate Change Law* <<http://columbiaclimatelaw.com/files/2016/06/Wentz-et-al.-2016-02-Climate-Change-Considerations-in-Federal-EIS-2012-14.pdf>>.

<sup>55</sup> *Ibid.*

<sup>56</sup> *Ibid* at ii.

<sup>57</sup> *Ibid* at iii.

<sup>58</sup> *Ibid.*

<sup>59</sup> *Ibid* at 32.

<sup>60</sup> *Ibid* at 33.

<sup>61</sup> *Ibid.*



emissions.<sup>62</sup> Three projects considered a full lifecycle GHG assessment from the project.<sup>63</sup> The federal agencies that did not include the downstream emissions from the project did so because they believed assessing downstream emissions were too uncertain as it was an end-use emission.<sup>64</sup> The survey of the fossil fuel projects reveals the trend of federal projects considering GHGs in project assessment but inconsistent practice in the consideration of upstream and downstream emissions. One of the reasons given by the federal agencies for not including downstream emissions in the EIS is because of the uncertainty of calculating the end-use emissions from the product.

## **5.5 NEPA Guidance on Upstream and Downstream Emissions**

The CEQ issued several regulations to implement the provisions of NEPA.<sup>65</sup> The CEQ regulations state how federal agencies implement the provisions of NEPA concerning EIA.<sup>66</sup> The CEQ regulations are integral to the decision making of federal agencies concerning the EA of energy projects.<sup>67</sup> Federal agencies are bound by the provisions of the CEQ regulations and regulations state how the federal agencies should prepare an EIS.<sup>68</sup> Under NEPA, the CEQ has the power to prepare and issue guidance documents on how NEPA should be implemented.<sup>69</sup> One of the guidance documents, which is central to this thesis, is the CEQ's draft guidance document on the Consideration of Greenhouse Gases, published in June 2019.<sup>70</sup> The CEQ draft guidance on the

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<sup>62</sup> *Ibid* at 35.

<sup>63</sup> *Ibid*.

<sup>64</sup> *Ibid*.

<sup>65</sup> Office of National Environmental policy and compliance, "CEQ Guidance Documents" (last visited 30 April 2020) online: *Energy.Gov* <<https://www.energy.gov/nepa/ceq-guidance-documents>>; 40 CFR § 1506.7.

<sup>66</sup> 40 CFR § 1506.7

<sup>67</sup> NEPA, "The Council on Environmental Quality" (last visited 30 April 2020) online: *CEQ* <<https://ceq.doe.gov/>>.

<sup>68</sup> Council Environmental Quality, "Environmental Justice Guidance Under The National Environmental Policy Act" (last visited to 30 April 2020) at 1, online (pdf): *EPA* <[https://www.epa.gov/sites/production/files/2015-02/documents/ej\\_guidance\\_nepa\\_ceq1297.pdf](https://www.epa.gov/sites/production/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf)>.

<sup>69</sup> 40 CFR § 1506.7

<sup>70</sup> Council on Environmental Quality, "Draft National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions" (23 April 2020) at 1-2, online (pdf): *Whitehouse* <<https://www.whitehouse.gov/wp-content/uploads/2017/11/CEQ-NEPA-Draft-GHG-Guidance-0331-ZA03-Final-062119-Web-Version.pdf>>; 85 FR 30097.

Consideration of Greenhouse Gases helps federal agencies to consider GHG emissions in NEPA analysis of a designated project.<sup>71</sup>

Concerning upstream and downstream emissions, courts have decided that upstream and downstream emissions fall under the indirect effects of fossil fuel extraction and transportation projects.<sup>72</sup>

Before the 2019 draft guidance, there was the 2016 guidance on climate change published in August 2016.<sup>73</sup> The 2016 guidance mandated that federal agencies consider both direct and indirect GHG emissions in the assessment process.<sup>74</sup> However, the 2016 guidance did not expressly mention upstream and downstream emissions, but the agency was expected to ensure that the EIS considered all indirect effects from the project.<sup>75</sup> It is important to note that the 2016 guidance was withdrawn.

The purpose of the 2019 draft guidance is to ensure federal agencies comply with NEPA.<sup>76</sup> The draft guidance mandates that the EA and EIS should contain a projection of the proposed project's direct and reasonable foreseeable indirect GHG emissions to assess potential climate effects.<sup>77</sup> The direct effects are caused by the action and occur at the same time or place while the indirect effects are caused by the action but occur later or are farther removed in the distance but are still reasonably foreseeable.<sup>78</sup>

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<sup>71</sup> *Council on Environmental Quality*, *supra* note 70 at 3.

<sup>72</sup> *Michael Burger & Jessica Wentz*, *supra* note 4 at 130; *Sierra Club*, 867 F.3d at 1374 and *San Juan Citizens Alliance v. U.S. Bureau of Land Mgmt.*, 326 F. Supp. 3d at 1244.

<sup>73</sup> *Ibid.*

<sup>74</sup> *Ibid.*

<sup>75</sup> *Ibid* at 131; *Protection of Environment*, 40 CFR §1508.8(b).

<sup>76</sup> *Council on Environmental Quality*, *supra* note 70 at 1-2.

<sup>77</sup> *Ibid* at 2-3.

<sup>78</sup> *Ibid.*

The guidance makes mention of the rule of reason as a means to understand the close causal relationship between the proposed action and effect.<sup>79</sup> The guidance seeks to consider only issues that its terms to be truly significant.<sup>80</sup> GHGs is truly significant if it is a direct and reasonably foreseeable indirect GHG emissions if the emissions are substantial enough to warrant quantification and practicable using available GHG data and quantification tools.<sup>81</sup>

Concerning whether the CEQ's 2019 guidance on GHG emission mandates federal agencies to consider indirect emissions which cover upstream and downstream emissions, the CEQ guidance does not specify the extent to which agencies will consider indirect GHG emissions.<sup>82</sup> Instead, assessing indirect emissions are described broadly as the CEQ guidance states that agencies should consider indirect environmental consequences that are reasonably foreseeable and precludes agencies from considering the indirect environmental consequences that are remote.<sup>83</sup>

There is ambiguity as to whether upstream and downstream emissions can be considered because the CEQ guidance permits agencies not to consider speculative or remote environmental consequences.<sup>84</sup> In contrast, the decisions of the courts show inconsistency in the application of upstream or downstream emissions.<sup>85</sup> For instance, the court decisions in three recent and significant District of Columbia Circuit cases highlight the issue of this inconsistency.<sup>86</sup> In the first two cases, the court held that there was no obligation for FERC and the Department of Energy to

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<sup>79</sup> *Ibid* at 4.

<sup>80</sup> *Ibid*.

<sup>81</sup> *Ibid* at 4-5.

<sup>82</sup> Katie Huffling et al., "Letter to CEQ Regarding NEPA Guidance on Consideration of of Greenhouse Gases" (2019) at 12, online (pdf): *NCPA* <<https://ncca.s3.amazonaws.com/docs/3/3ed32abd-bb5b-49df-b5e8-b11ae5d24846.pdf?1566916181>>.

<sup>83</sup> *Ibid*.

<sup>84</sup> *Ibid* at 13.

<sup>85</sup> James W. Coleman, "Beyond the Pipeline Wars: Reforming Environmental Assessment of Energy Transport Infrastructure" (2018) 1: 119 *Utah Law Review* 128.

<sup>86</sup> *Ibid*; *Sierra Club v. Fed Energy Regulatory Comm'n*, 827 F.3d 36, 46-49 (D.C. Cir. 2016) & *Sierra Club v. U.S. Dept. of Energy*, Case No. 15-1489 (D.C. Cir. Aug. 15, 2017).

consider upstream gas production and downstream consumption in approving LNG Facilities and exports.<sup>87</sup> However, in the third case, FERC was required to consider the downstream effects of natural gas use from the natural gas pipeline.<sup>88</sup>

## 5.6 Federal Regulation of Fossil Fuel Extraction and Transportation

The U.S. federal government has authority over fossil fuel extraction and transport on federal lands.<sup>89</sup> The federal government is responsible for leasing oil and gas reserves, which are located on public lands.<sup>90</sup> When there is an energy project that requires federal approval, the environmental review process under NEPA will be followed by the germane federal agency. Concerning the extraction of fossil fuels, the agency responsible is the BLM, which is under the Department of Interior (DOI) and has jurisdiction over the leasing and production of oil, gas and coal on federal lands.<sup>91</sup> The USFS has jurisdiction over the production of fossil fuel located on National Forest Services lands.<sup>92</sup> BOEM is responsible for managing and developing the U.S.'s outer continental shelf energy and mineral resources in a sustainable manner.<sup>93</sup> The Office of Surface Mining Reclamation and Enforcement (OSMRE) is within DOI and is responsible for protecting the environment from the adverse effects of surface coal mining operations.<sup>94</sup>

Concerning the transportation and processing of fossil fuels like the construction of pipelines, the federal agencies responsible are the FERC and the Department of Energy (DOE).<sup>95</sup>

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<sup>87</sup> *James W. Coleman, supra* note 85 at 128.

<sup>88</sup> *James W. Coleman, supra* note 86 at 128; *Sierra Club v. U.S. Fed. Energy. Reg. Comm'n*, Case No. 16-1329 (D.C. Cir. Aug. 22, 2017).

<sup>89</sup> *Michael Burger & Jessica Wentz, supra* note 4 at 117-118.

<sup>90</sup> *Ibid.*

<sup>91</sup> *Ibid.*

<sup>92</sup> *Ibid.*

<sup>93</sup> *Ibid.*; Bureau of Ocean Energy Management “Strategic Framework” (last visited 18 April 2020) at 3-4, online (pdf): *BOEM* <<https://www.boem.gov/sites/default/files/about-boem/Strategic-Framework.pdf>>.

<sup>94</sup> *Michael Burger & Jessica Wentz, supra* note 4 at 117-118; Office of Surface Mining Reclamation and Enforcement “Who we are” (last visited 18 April 2020), online: *OSMRE* <<https://www.osmre.gov/about.shtm>>.

<sup>95</sup> *Michael Burger & Jessica Wentz, supra* note 4 at 119-122.

The responsibility for constructing oil and gas infrastructure is the FERC, and the DOE authorization is responsible for LNG exports.<sup>96</sup> The statutes establishing these bodies require an environmental review to be conducted in carrying out their responsibilities.<sup>97</sup> The federal agencies stated above have the responsibility to conduct an environmental review for projects under their jurisdiction, and they have the discretion to either approve or deny the construction of such projects taking into consideration the environmental impacts of such projects, mitigation and adaptation measures, as well as the public interest.<sup>98</sup>

### **5.6.1 Federal Regulation of Natural Gas Pipelines: FERC**

The U.S. energy landscape was transformed by the use of hydraulic fracturing to produce natural gas, which made the U.S. a self-reliant and exporting energy market capable of exporting vast quantities of natural gas.<sup>99</sup> FERC must determine how to balance the development of natural gas with the NEPA review.<sup>100</sup> The question is to what degree should FERC's NEPA review consider upstream or downstream emissions in the development of natural gas projects.<sup>101</sup>

FERC is responsible for the EA of interstate natural gas pipelines and LNG export facilities.<sup>102</sup> Section 7 of the *Natural Gas Act* invests FERC with the responsibility of assessing the applications of designated interstate natural gas pipeline projects.<sup>103</sup> Section 7 grants FERC the

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<sup>96</sup> *Ibid.*

<sup>97</sup> *Ibid.*

<sup>98</sup> *Ibid.*

<sup>99</sup> Aaron Flyer, "FERC Compliance under NEPA: FERC's Obligation to Fully Evaluate Upstream and Downstream Environmental Impacts Associated with Siting Natural Gas Pipelines and Liquefied Natural Gas Terminals" (2015) 27:2 *Geo Intl Env'tl L Rev* 304.

<sup>100</sup> *Ibid.*

<sup>101</sup> *Ibid.*

<sup>102</sup> *Commerce and Trade* 15 U.S.C. § 717f(e); Institute for Policy Integrity, "Pipeline Approvals and Greenhouse Gas Emissions" (April 2019) at 6, online (pdf): *Institute for Policy Integrity* <[https://policyintegrity.org/files/publications/Pipeline Approvals and GHG Emissions.pdf](https://policyintegrity.org/files/publications/Pipeline%20Approvals%20and%20GHG%20Emissions.pdf)>.

<sup>103</sup> *Commerce and Trade* 15 U.S.C. § 717f(e).

power to approve, deny or amend any designated projects after considering the environmental consequences of the project.<sup>104</sup>

The environmental review by FERC is initiated by an application from proponents of the designated pipeline project.<sup>105</sup> The FERC policy statement guides the FERC assessment of proposed projects. FERC undertakes a qualitative assessment of proposed projects to determine whether the project is in the public interest.<sup>106</sup> FERC considers the environmental consequences of the project to determine whether the project is in the public interest.<sup>107</sup> If satisfied that the project is in the public interest, FERC issues a certificate of public convenience and necessity to the proponents of the pipeline project.<sup>108</sup>

When conducting an environmental review, FERC is mandated by NEPA to consider the environmental effects of the proposed project, and FERC should prepare an EIS.<sup>109</sup> FERC is mandated to consider the direct, indirect and cumulative environmental consequences from the proposed project.<sup>110</sup> It is important to establish that the courts have stated that NEPA requires the assessment of reasonably foreseeable upstream and downstream emissions.<sup>111</sup>

FERC has previously argued that upstream and downstream emissions are not indirect effects under NEPA that are reasonably foreseeable.<sup>112</sup> FERC has argued that there is little information about the upstream and downstream emissions from proposed LNG pipelines, and such

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<sup>104</sup> *Institute for Policy Integrity, supra* note 102 at 12.

<sup>105</sup> *Institute for Policy Integrity, supra* note 102 at 6.

<sup>106</sup> *Ibid.*

<sup>107</sup> *Ibid* at 6-7.

<sup>108</sup> *Institute for Policy Integrity, supra* note 102 at 10.

<sup>109</sup> *Ibid* at 12.

<sup>110</sup> *Ibid* at 6.

<sup>111</sup> *Ibid* at 12.

<sup>112</sup> *Michael Burger & Jessica Wentz, supra* note 4 at 137-138; *Institute for Policy Integrity, supra* note 102 at 14.

effects are not reasonably foreseeable.<sup>113</sup> This argument was rejected in the case of *Sabal Trail*.<sup>114</sup> The *Sabal Trail* case pertains to the Southeast Market Pipelines Project, which involves the construction of the 515-mile Sabal Trail pipeline.<sup>115</sup> The Sabal Trail pipeline will transport 1.1 billion cubic feet per day of gas through Alabama and Georgia to power plants in Florida.<sup>116</sup> FERC argued that it did not need to assess the GHGs from the downstream burning of the gas, and the downstream GHGs are not indirect effects that are reasonably foreseeable.<sup>117</sup> The D.C. Circuit Court of Appeals rejected FERC's argument. The court in the *Sabal Trail* case required FERC to "discuss the significance" of GHG emissions from the pipeline and assess the downstream GHG emissions from the project, and in the event, FERC decides not to evaluate it, it should provide reasons for not assessing it.<sup>118</sup> The court interpreted what was reasonably foreseeable concerning the natural gas pipeline in question and submitted that downstream emissions were a reasonably foreseeable effect from the construction of that particular pipeline.<sup>119</sup> The court instructed FERC to prepare an EIS detailing the significance of the downstream GHG emissions.<sup>120</sup> FERC followed up, clarifying that the assessment of downstream emissions were only relevant to the narrow circumstances of that particular case.<sup>121</sup> In doing so, it preserved its discretion over the matter.

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<sup>113</sup> *Institute for Policy Integrity*, *supra* note 102 at 14.

<sup>114</sup> *Sierra Club v. DOE*, 867 F.3d 189, 202 (D.C. Cir. 2017); *Institute for Policy Integrity*, *supra* note 102 at 14-15; and *Michael Burger & Jessica Wentz*, *supra* note 4 at 137-138.

<sup>115</sup> Elly Benson, "In Major Climate Decision, D.C. Circuit Rejects Federal Approval of Sabal Trail Pipeline" (28 August 2017), online: *SEIRRA CLUB* < <https://www.sierraclub.org/planet/2017/08/sabal-trail-pipeline-FERC-fracked-gas-pipeline>>.

<sup>116</sup> *Ibid.*

<sup>117</sup> *Institute for Policy Integrity*, *supra* note 102 at 14-15.

<sup>118</sup> FERC, "Dissent on Southeast Market Pipelines (Sabal Trail)" (10 August 2018), online: *FERC* < <https://www.ferc.gov/media/statements-speeches/glick/2018/08-10-18-glick.asp#.Xp2wDchKhPZ>>; *Sabal Trail*, 867 F.3d at 1375.

<sup>119</sup> *Michael Burger & Jessica Wentz*, *supra* note 4 at 137-138; *Institute for Policy Integrity*, *supra* note 102 at 15.

<sup>120</sup> *Institute for Policy Integrity*, *supra* note 102 at 15.

<sup>121</sup> *Ibid.*

### **5.6.2 Federal Regulation of Oil Pipelines: The Bureau of Land Management (BLM)**

The BLM is the lead federal agency with the jurisdiction to prepare an EIS or conduct an EA for oil and gas exploration activities on federal lands.<sup>122</sup>

The BLM has jurisdiction over the leasing, exploration and production of oil and gas on federal lands.<sup>123</sup> BLM has to comply with NEPA regulations and guidance in conducting an EIS or EA on federal land.<sup>124</sup>

BLM's consideration of indirect emissions has been inconsistent. Initially, BLM did not consider downstream emissions because it stated that it was an inevitable outcome of oil and gas production that will occur regardless of the implementation of the proposed project.<sup>125</sup>

BLM has considered indirect emissions in some coal mining projects, but concerning oil and gas development, BLM in the EIS of the Bull Mountain Unit Master Development Plan Project only considered emissions from the production phase while ignoring the indirect emissions.<sup>126</sup>

BLM is mandated to adhere to the CEQ guidance on GHGs while preparing its EIS or EA. This means that BLM is not mandated to assess indirect GHGs if it is speculative or remote.<sup>127</sup>

### **5.7 Comparing GHGs in the EIA process in the Canadian and U.S. jurisdictions**

This section of the thesis examines the U.S. EIA system concerning GHGs, in contrast to the Canadian system. The scope of the analysis in this section is limited to two areas. The first is the structure of EIA in U.S. and Canada, and the second is the scope of GHGs in the environmental

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<sup>122</sup> Michael Burger & Jessica Wentz, *supra* note 4 at 134.

<sup>123</sup> E. Allison & B. Mandler "U.S. Regulation of Oil and Gas Operations" (1 June 2018), online: *American Geosciences Institute* < <https://www.americangeosciences.org/geoscience-currents/us-regulation-oil-and-gas-operations>>.

<sup>124</sup> *Ibid.*

<sup>125</sup> Michael Burger & Jessica Wentz, *supra* note 4 at 134.

<sup>126</sup> *Ibid* at 135.

<sup>127</sup> *Council on Environmental Quality*, *supra* note 70 at 4-5.



review process in Canada and the U.S. The purpose of this analysis is to understand the approaches taken by these two jurisdictions on GHGs when conducting the environmental review.

Concerning the GHGs in the environmental review process, the U.S. provides a CEQ guidance, which stipulates how federal agencies will consider GHG emissions in the environmental review of energy projects.<sup>128</sup> The NEPA CEQ guidance of GHGs was published in 2019, and it mandates federal agencies to consider indirect environmental consequences that are reasonably foreseeable.<sup>129</sup> It is left for the federal agencies, and in the event of litigation, the courts to determine whether they will consider upstream and downstream emissions, and this will be done on a case-by-case basis.<sup>130</sup>

In Canada, the final SACC is the guidance document of how GHG emissions will be considered in the IA process under the IAA.<sup>131</sup> The final SACC expressly stipulates that only upstream emissions will be considered in the IA process, and downstream emissions will not be considered.<sup>132</sup>

The major difference between the NEPA and IAA concerning upstream and downstream GHG is that the NEPA CEQ guidance permits the consideration of upstream and downstream emissions that are reasonably foreseeable while the IAA and the SACC only permits the consideration of upstream emissions.<sup>133</sup> Thus, the U.S. NEPA CEQ guidance is different in the scope of GHG consideration in the EIA process of energy projects. It's not clear that NEPA requires

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<sup>128</sup> *Council on Environmental Quality*, *supra* note 71.

<sup>129</sup> *Ibid.*

<sup>130</sup> 40 C.F.R 1508.25 (C).

<sup>131</sup> Environment and Climate Change Canada, "Strategic Assessment of Climate Change" (last modified 5 December 2018) at 1, online (pdf): *Strategic Assessment of Climate Change* <<https://www.strategicassessmentclimatechange.ca/15112/widgets/61020/documents/36886>>.

<sup>132</sup> *Ibid* at 6.

<sup>133</sup> *Council on Environmental Quality*, *supra* note 70 at 4-5; *Katie Huffling et al.*, *supra* note 82 at 12 and *Environment and Climate Change Canada*, *supra* note 131 at 8.

consideration of upstream emissions. One can argue that there is a trend toward requiring consideration of upstream and downstream emissions, but it is certainly not established, and there are many counterexamples.

The proposed final NEPA rule, which is purported to amend the current NEPA regulations, excludes consideration of “agency activities or decisions with effects located entirely outside of the jurisdiction of the United States,” which some might argue would exclude consideration of upstream production emissions in Canada.<sup>134</sup> Also, the proposed regulations change the definition of environmental effects by striking references to direct, indirect, and cumulative effects.<sup>135</sup> Instead, the proposed rule changes environmental effects to those effects that “are reasonably foreseeable and have a reasonably close causal relationship to the proposed action.”<sup>136</sup> Thus, if the U.S. Congress passes the changes, upstream and downstream emissions will be determined by the agencies and, in the case of any legal dispute, the courts.

## **5.8 Conclusion**

The U.S. EIA system has an uneven recognition of GHGs in the environmental review process. NEPA and the CEQ guidance on climate change and GHGs provide for the recognition of GHGs, but there is no certainty as to the extent to which upstream and downstream emissions are considered based on the CEQ guidelines. The courts in the U.S. have stated that NEPA mandates some federal agencies to consider upstream and downstream emissions in the environmental review process of energy projects. However, there has been an uneven consideration of upstream and downstream emissions in the environmental review process of energy projects in the U.S. There are several factors that have seen the uneven consideration of GHGs in the environmental review

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<sup>134</sup> 85 FR 43304 & 43347.

<sup>135</sup> *Ibid* at 43331.

<sup>136</sup> *Ibid*.

process. Some of the factors include the decentralization of environmental review responsibilities between the various federal agencies under the NEPA jurisdiction. These federal agencies determine the extent to which GHGs will be considered based on the provisions of NEPA. The new NEPA CEQ guidance on GHGs does not expressly state whether upstream and downstream emission will be considered, thus, the decision to consider upstream and downstream emissions are made by the federal agencies, and in the event of a legal dispute, the court may mandate the federal agencies to consider the emissions depending on the peculiarities of the project. The examination of the GHG consideration in the IAA process of energy projects in both the U.S. and Canada shows that in the U.S, there is an uneven and inconsistent application of upstream and downstream emissions. However, in Canada, there is statutory provision and guidance that requires the consideration of upstream emissions.

## Chapter 6: Conclusions and the Future of EIA and GHGs in Canada.

### 6.1 Review of Ground Covered

This thesis contains an examination of how GHGs – upstream and downstream emissions – have been considered in the EIA process of energy projects in Canada and the U.S. It also considers the extent to which Canada’s new IAA regime may assist in achieving Canada’s emission reduction commitments.

Chapter one provided the introduction, research questions, research methodology, and structure of the thesis. In the introduction of Chapter two, the thesis explained the various EA legal regimes to be considered for discussion. The thesis considers how GHGs was considered in the CEAA 2012<sup>1</sup> and IAA 2019<sup>2</sup> EA legislations. EA is one of the ways by which climate change can be addressed because the environmental impacts of a designated project, whether adverse or beneficial, are assessed before the project is approved.<sup>3</sup> Canada is projected to have a slight increase in energy use as natural gas and oil products used in 2017 made up 35% of Canada’s total energy consumption, and at 2040 natural gas is projected to make up 40% while oil products will make up 32%.<sup>4</sup> The data suggests that oil and gas projects will still be in construction with better technology as the world gradually transitions into a low carbon economy. The need for an EA process that considers GHGs from the designated project is essential to address climate change in a sustainable manner.

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<sup>1</sup> *Canadian Environmental Assessment Act*, SC 2012.

<sup>2</sup> *Impact Assessment Act*, SC 2019, c. 28, s 1.

<sup>3</sup> Agrawala, S et al, “Incorporating Climate Change Impacts and Adaptation in Environmental Impact Assessments: OECD Environment Working Paper No. 24” (2010), online (pdf): *OECD* <[https://en.klimatilpasning.dk/media/5356/oecd\\_adaptation\\_eia.pdf](https://en.klimatilpasning.dk/media/5356/oecd_adaptation_eia.pdf)>.

<sup>4</sup> Canada Energy Regulator, “Canada’s Energy Future 2019” (2019) at 4, online (pdf): *CER* <<https://www.cer-rec.gc.ca/nrg/ntgrtd/fttr/2019/2019nrgftr-eng.pdf>>.

Chapter two provided an overview of EA in international climate agreements. Chapter two explored the historical perspective of EA in Canada and the legal and regulatory changes of EA in Canada. The CEAA era did not have an express requirement of considering GHGs in the EA process, but the new IAA 2019 mandates that GHGs be considered in the IA process of designated projects.

Chapter three examined the EA legislation in CEAA 2012. In particular, this chapter surveyed whether the CEAA 2012 mandated GHGs to be assessed in the EA process of energy projects in Canada. From the examination of the CEAA 2012, one can see that there is no express mandate by the legislation to consider upstream or downstream emissions in the approval process of energy projects. However, there was guidance on how GHGs will be assessed in the EA process under the CEAA 2012. It was the 2003 Guidance on Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners,<sup>5</sup> the NEB Handbook/ Guidelines for hearings, the Interim measures of pipeline reviews,<sup>6</sup> and the terms of reference for several projects like Northern Gateway, the Kearl Oil Sands and Jackpine Mine Expansion, Frontier, Energy East, and Trans-Mountain.

Chapter four examined how the IAA considered GHGs in the IA process of designated projects, providing an examination of the key provisions of the IAA relating to climate change. Chapter five examines whether upstream and downstream emissions are assessed in the environmental review process in the U.S. Also, chapter five examines the difference between the U.S. and Canada's approach to considering upstream and downstream emissions in the

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<sup>5</sup> Impact Assessment Agency of Canada, "Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners" (last visited 18 September 2019), online: *Government of Canada* < <https://www.ceaa.gc.ca/default.asp?lang=En&n=A41F45C5-1&offset=3&toc=hide&pedisable=true>>.

<sup>6</sup> Canada Energy Regulator, "National Energy Board Hearing Process Handbook" (last visited 13 April 2020) at 1, online (pdf): *Canada Energy Regulator* < <https://www.cer-rec.gc.ca/prtcptn/hrng/hndbk/pblchrngpmpht-eng.pdf>>.

environmental review of energy projects. It concluded that there is an uneven consideration of upstream and downstream emissions in the U.S, and it is not clear when NEPA requires consideration of upstream or downstream emissions. By contrast, Canada has greater clarity, but a narrower scope of consideration – that is, no consideration of downstream emissions.

## **6.2 The Future of IA and GHG Emissions in Canada.**

The importance of keeping global warming to below 1.5°C is important for human protection.<sup>7</sup> The *Paris Agreement* demonstrates a global consensus between countries with different policies, legislative frameworks, and worldviews. They share a common goal to ensure global energy and economic systems transform to reduce GHG emissions.<sup>8</sup> Canada has pledged to implement its commitment to the *Paris Agreement* targets, and one of the ways to achieve this is by using regulatory tools like IA.<sup>9</sup>

IA addresses climate change at the early stage of a designated project as the regulatory agency evaluates the project on the existing climate target. This ensures that projects meet the climate policies of the government.<sup>10</sup> Through IA, proponents of a project can reduce any operational costs associated with emissions and adopt infrastructure that reduces GHG emissions.<sup>11</sup> Also, through the IA process, designated projects can comply with Canada’s present and future GHG targets by accounting for GHG emissions in the lifecycle of projects.<sup>12</sup>

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<sup>7</sup> “*Paris Agreement*”, 12 December 2015, FCCC/CP/2015/L.9/Rev.1 (entered into force 29 January 2016) (hereafter ‘*Paris Agreement*’).

<sup>8</sup> Robert B. Gibson et al., “From Paris to Projects Clarifying the implications of Canada’s climate change mitigation commitments for the planning and assessment of projects and strategic undertakings” (January 2019) at 7, online (pdf): *Metcalf Foundation* <[https://metcalfoundation.com/site/uploads/2019/01/Metcalf\\_SReport-19-01-2019\\_CMYK.pdf](https://metcalfoundation.com/site/uploads/2019/01/Metcalf_SReport-19-01-2019_CMYK.pdf)>.

<sup>9</sup> *Ibid* at 13-15.

<sup>10</sup> *Ibid* at 20-21.

<sup>11</sup> Nova Scotia, “Guide to Considering Climate Change in Environmental Assessments in Nova Scotia” (2011) at 2, online (pdf): *Nova Scotia* <<https://novascotia.ca/nse/ea/docs/EA.Climate.Change.Guide.pdf>>.

<sup>12</sup> *Ibid* at 4.

The IAA requirement to consider GHG emissions in the assessment of energy projects in Canada is an attempt to integrate climate change mitigation, adaptation measures, and sustainability requirements into the IA process.<sup>13</sup> The IAA incorporates a climate test when assessing designated projects and also when the projects are to obtain approval by the Minister (or the federal Cabinet as the case may be). The reviewing panel and the Minister (or the federal Cabinet as the case may be), among other factors, are obliged to consider how the designated project will affect Canada's climate change commitments.<sup>14</sup> The Paris commitments encourage a progression of the NDCs of parties, and as such, signatories are to improve continuously on their commitments.<sup>15</sup>

Although the final SACC states that GHG emissions are to be considered in the IAA assessment process, such assessment is limited to net GHG and upstream emissions.<sup>16</sup> Downstream emissions are not to be assessed.<sup>17</sup>

Information gathering and decision making are two important aspects of an IA process. Concerning information gathering, the IAA has made progress in contrast to previous IA legislation.

Where the IAA falls short is in the aspect of decision making. One can say that as long as high emitting energy projects can override climate change considerations based on economic interests, there can be a set back in Canada attaining its climate change commitments.

The IAA is a step in the right direction, but for Canada to meet the *Paris Agreement* targets, more needs to be done. One can argue that reforms of the IAA should include assessing downstream

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<sup>13</sup> Robert B. Gibson et al, *supra* note 8 at 17.

<sup>14</sup> *Impact Assessment Act*, *supra* note 2 at s.22 & 63; Robert B. Gibson et al, *supra* note 8 at 23-24.

<sup>15</sup> *Ibid.*

<sup>16</sup> Environment and Climate Change Canada, "Strategic Assessment of Climate Change" (last modified 5 December 2018) at 5-8, online (pdf): *Strategic Assessment of Climate Change* <<https://www.strategicassessmentclimatechange.ca/15112/widgets/61020/documents/36886>>.

<sup>17</sup> *Ibid.*

emissions. However, there needs to be a better discussion as to the feasibility of considering downstream emissions in the assessment process. The development of IA to recognize downstream emissions and the overall growth of IA to meet Canada's climate commitments will be based on the willingness of policymakers and the public to match the increasing threat of climate change and to ensure that IA is done in the most sustainable manner. Thus, this thesis lays the groundwork for further discussion on the subject of assessing GHG emissions in the IA process.

This thesis did not cover the scope of the legal, economic, and social impacts that recognizing upstream and downstream emissions will have on the Canadian oil and gas industry, the global climate governance regime, and the international oil and gas governance system. The scope of the thesis was to understand how far Canada has come in addressing GHGs in the IA process. To this end, this thesis concludes that the Canadian system has grown from a time when GHGs was not a legislative requirement in the IA process to the IAA, where upstream emissions are considered a pre-requisite for assessing a designated project. Again, more needs to be done if the goal is for Canada to meet its Paris commitment, but the recent reforms are a step in the right direction.



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