



HOUSE OF COMMONS  
CHAMBRE DES COMMUNES  
CANADA

# **CLEAN GROWTH AND CLIMATE CHANGE: HOW CANADA CAN LEAD INTERNATIONALLY**

**Report of the Standing Committee on Environment and  
Sustainable Development**

**John Aldag, Chair**

**APRIL 2019  
42<sup>nd</sup> PARLIAMENT, 1<sup>st</sup> SESSION**

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## **NOTICE TO READER**

### **Reports from committee presented to the House of Commons**

Presenting a report to the House is the way a committee makes public its findings and recommendations on a particular topic. Substantive reports on a subject-matter study usually contain a synopsis of the testimony heard, the recommendations made by the committee, as well as the reasons for those recommendations.

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# **THE STANDING COMMITTEE ON ENVIRONMENT AND SUSTAINABLE DEVELOPMENT**

has the honour to present its

## **NINETEENTH REPORT**

Pursuant to its mandate under Standing Order 108(2), the Committee has studied Clean Growth and Climate Change: How Canada Can Lead Internationally and has agreed to report the following:



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## SUMMARY

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Between 6 October 2018 and 20 February 2019, the House of Commons Standing Committee on Environment and Sustainable Development (the committee) conducted the second part of its study on Clean Growth and Climate Change, which focused on international leadership.

The committee heard from witnesses about steps being taken in Canada to reduce emissions and address climate change within the Pan-Canadian Framework on Clean Growth and Climate Change, including putting a price on carbon pollution. The committee also heard about complementary actions such as providing international climate finance, addressing links between trade and climate policy, and developing rules for the international transfer of emissions credits.

The committee heard from witnesses about the Intergovernmental Panel on Climate Change's October 2018 *Special Report on Global Warming of 1.5°C*, which highlights the extensive environmental and human costs anticipated if global emissions are not significantly reduced in the next 12 years. The Special Report notes that "rapid and far-reaching" transitions in land, energy, industry, buildings, transport, and cities would be needed to keep warming to 1.5°C and avoid these costs.

The report describes the international climate change agreements and negotiations Canada is part of, and outlines Canada's greenhouse gas emissions and emission reduction plans. It outlines how pollution pricing works in Canada and how putting a price on pollution can reduce emissions, spur innovation, and support the transition to a low-carbon economy. The report also outlines the numerous other measures Canada has taken to reduce greenhouse gases and to address climate change internationally.

All witnesses in the study placed a high priority on tackling climate change. The vast majority of witnesses supported putting a price on carbon pollution, and the report outlines their reasons; notably, recognizing it as the most cost-effective way for a society to reduce greenhouse gas emissions and accelerate the transition to a low-carbon economy. The report outlines input from sectors that would like to see changes in the way carbon pollution pricing applies to them.

The report notes that Canada is seen as a leader in pricing carbon pollution, and the report recommends ways in which Canada could increase its leadership in climate policy more broadly. The committee recommended that the Government of Canada provide policy certainty to Canadian businesses and spur low-carbon innovation by ensuring that

the price signal of carbon pollution pricing remains intact. The committee also recommended that the Government of Canada support an increase in global ambition—that is, a faster reduction of greenhouse gas emissions both in Canada and elsewhere,—and that the Government make climate policy a non-partisan issue.

The committee recognizes that Canada has many advantages in a global shift to a low-carbon economy, and believes that this is a time when Canada can be innovative, build on strengths, and not only bring Canadians together to mitigate climate change, but also play a leading role globally in addressing the challenging global issue of climate change.

# LIST OF RECOMMENDATIONS

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*As a result of their deliberations committees may make recommendations which they include in their reports for the consideration of the House of Commons or the Government. Recommendations related to this study are listed below.*

## **Recommendation 1**

**The committee recommends that the Government of Canada, in light of the Special Report on Global Warming of 1.5°C of the Intergovernmental Panel on Climate Change, push for greater global ambition on GHG reductions, to accelerate the shift to a low carbon economy. .... 12**

## **Recommendation 2**

**The committee recommends that the Government of Canada promote Canada’s clean energy sources as a means to attract international investment and position Canada as a location for low-emission industrial production and technology development. .... 33**

## **Recommendation 3**

**The committee recommends that the Government of Canada provide policy certainty to Canadian businesses and spur low carbon innovation by ensuring that the price signal of carbon pricing remains intact. .... 34**

## **Recommendation 4**

**The committee recommends that the Government of Canada permit airlines to purchase offsets, managed within a transparent and robust governance regime, to help meet their greenhouse gas emissions targets. .... 38**

## **Recommendation 5**

**The committee recommends that the Government of Canada further incentivize the development and commercialization of low-greenhouse-gas-emission airline fuels. .... 38**

**Recommendation 6**

The committee recommends that the Government of Canada take a leadership role in supporting clean technology development, not only to reduce emissions and grow the economy in Canada, but also to help other countries meet their emissions reductions goals. .... 39

**Recommendation 7**

The committee recommends that the Government of Canada maintain Canada’s position as a global leader in pricing carbon pollution and work with other countries to expand the number of jurisdictions pricing carbon. .... 41

**Recommendation 8**

The committee recommends that the Government of Canada work towards making climate policy a non-partisan issue. .... 41

**Recommendation 9**

The committee recommends that the Government of Canada embark on a process to identify Canadian non-governmental organizations and local civil society organizations capable of delivering effective projects to support adaptation and vulnerable populations in other countries, and help these organizations access Canadian and international climate finance funds. .... 46

**Recommendation 10**

The committee recommends that the Government of Canada increase the proportion of its climate finance funding that is dedicated to adaptation measures to 50%. .... 47

**Recommendation 11**

The committee recommends that the Government of Canada ensure that a greater amount of the climate finance is given as grants and not just as loans, given the difficulty of repayment for many of the poorest and most vulnerable states. .... 47

**Recommendation 12**

The committee recommends that the Government of Canada increase its climate finance further in future years with the goal of arriving at Canada's "fair share" of global climate finance based on the size of its economy; approximately \$1.8 billion annually. .... 47

**Recommendation 13**

The committee recommends that the Government of Canada, having committed to an international review of its fossil fuel subsidies, ensure that the results of this review are transparently shared, and that Canada continues to seek ways to reduce and eliminate fossil fuel subsidies. .... 48

**Recommendation 14**

The committee recommends that the Government of Canada continue to include innovative provisions in Canada's regional and bilateral trade agreements, particularly in areas that might assist with the transition to a low carbon economy and with trade in environmental goods and services. .... 49

**Recommendation 15**

The committee recommends that the Government of Canada take measures to protect and grow Canada's natural carbon sinks, such as forests, wetlands, soils, and oceans. .... 51

**Recommendation 16**

The committee recommends that the Government of Canada consider using internationally transferred mitigation outcomes to meet its emissions reduction targets and that it develop an approach to internationally transferred mitigation outcomes that clearly supports greater global ambition in terms of emissions reduction. .... 53

**Recommendation 17**

The committee recommends that the Government of Canada develop a national regime on the use of internationally transferred mitigation outcomes for Canada by establishing clear rules on their use, including what types of credits are acceptable, standards on measurement, reporting, and verification, and limitations on use, and that this regime have a mechanism to ensure that key principles, such as supporting emissions reduction ambition, are respected. .... 54

**Recommendation 18**

The committee recommends that the Government of Canada develop a strong mechanism for accountability for accomplishing the objectives of the Pan-Canadian Framework on Clean Growth and Climate Change. This mechanism should involve development of key indicators that help Canada measure progress over time and report consistently on that progress, with the goal of taking concrete action to meet Canada's *Paris Agreement* commitments..... 56



# CLEAN GROWTH AND CLIMATE CHANGE: HOW CANADA CAN LEAD INTERNATIONALLY

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## 1. INTRODUCTION

On 1 February 2018, the Standing Committee on Environment and Sustainable Development (the committee) agreed to conduct a review of Clean Growth and Climate Change in Canada and agreed that, in order to accomplish this review, the committee would study several focused areas and report to the House separately on each of them.<sup>1</sup> This is the second study in this review.

The committee began its study of international leadership on 16 October 2018. The study was carried out over nine meetings, during which committee members heard from 39 witnesses and received five written briefs. One meeting was added to the original study plan in November 2018, in order to include testimony related to the Special Report released by the International Panel on Climate Change on 8 October 2018. An additional two meetings were added in January 2019 so the committee could hear evidence specifically focused on pricing carbon pollution.

The members of the committee would like to thank each of the witnesses for contributing to the committee's work.

## 2. CONTEXT AND BACKGROUND

### a. International climate change agreements and negotiations

Canada is a party to the key international agreements relating to climate change, as outlined below.

#### **United Nations Framework Convention on Climate Change**

The United Nations Framework Convention on Climate Change (UNFCCC or the convention) was established in 1992 to manage climate change issues at the international level. Negotiations under the umbrella of the UNFCCC have led to several

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1 House of Commons, Standing Committee on Environment and Sustainable Development [ENVI], *Minutes of Proceedings*, 1 February 2018.



agreements, including the Kyoto Protocol (1997), the Copenhagen Accord (2009) and the *Paris Agreement* (2015).

The signatories—or “parties”—to the UNFCCC convene at an annual “Conference of the Parties” (COP) to review the implementation of the convention and to reach agreements that promote its effective implementation. These meetings are denoted by sequential numbers. COP 24 took place in Katowice, Poland, in December 2018.

### *Paris Agreement*

The *Paris Agreement* was reached at COP 21 in 2015. The parties committed to reducing greenhouse gas (GHG) emissions as part of global efforts to limit the rise in the global average temperature. The agreement aims “to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty,”<sup>2</sup> including by limiting the increase in the global average temperature to “well below 2°C”<sup>3</sup> above pre-industrial levels, and by “pursuing efforts to limit the temperature increase to 1.5°C”<sup>4</sup> above pre-industrial levels.

In what is known as a “bottom-up approach,” each party to the *Paris Agreement* decides on its own emissions reduction goal. These goals are articulated through “nationally determined contributions” (NDCs). The aim is for the aggregated contributions of all parties to lead to no more than a global temperature rise of 2°C.

According to Isabelle Berard, of Environment and Climate Change Canada (ECCC), “Canada is a strong advocate of the Paris Agreement because it has obligations for all parties.”<sup>5</sup> She explained that parties to the UNFCCC are currently negotiating the implementation guidelines for the agreement, often referred to as the “Paris rule book.” These guidelines will set out how parties will communicate their plans and actions to address climate change, how they will measure and report transparently on progress and how global progress will be measured. “The robust and effective implementation of the Paris Agreement is a top priority for Canada. We know that the adoption of common and robust guidelines for all countries will promote ambitious, credible and transparent

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2 United Nations Framework Convention on Climate Change, *Paris Agreement*, Article 2, 12 December 2015.

3 Ibid.

4 Ibid.

5 ENVI, *Evidence*, 16 October 2018, 1545 (Isabelle Bérard, Assistant Deputy Minister, International Affairs Branch, Department of the Environment).

climate action,” she added.<sup>6</sup> Progress was made on the “rule book” at COP 24 in Katowice, Poland, in December 2018, but some important decisions remain.<sup>7</sup>

### Article 6 negotiations

The *Paris Agreement*, through Article 6.2, provides for the development of a system of internationally transferred mitigation outcomes (ITMOs). Through this system, mitigation outcomes (i.e., GHG emissions reductions) could be transferred between parties, to contribute to countries’ NDCs.<sup>8</sup> In Article 6.4, the *Paris Agreement* allows for development of a mechanism that could include non-party actors (e.g. the private sector or non-federal jurisdictions) in this exchange of mitigation outcomes.

During discussions on Article 6 at COP 24 in 2018, parties were unable to reach agreement, meaning that negotiations must continue at COP 25, and implementation of Article 6 will be delayed.<sup>9</sup>

### Gender Action Plan of the United Nations Framework Convention on Climate Change

In November 2017, at COP 23, parties to the UNFCCC adopted the Gender Action Plan. This plan “seeks to advance women’s full, equal and meaningful participation and promote gender-responsive climate policy and the mainstreaming of a gender perspective in the implementation of the UNFCCC and the work of parties, the secretariat [United Nations Climate Change], United Nations entities and all stakeholders at all levels.”<sup>10</sup> By 2018, all parties are required to have gender-responsive climate policies, plans and programs on adaptation, mitigation, capacity building, technology and finance.

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6 Ibid.

7 Carbon Brief, [COP24: Key outcomes agreed at the UN climate talks in Katowice](#), 16 December 2018.

8 Asian Development Bank, [“Appendix: Informal Document by the Chair Subsidiary Body for Scientific and Technological Advice,” Decoding Article 6 of the Paris Agreement](#), 16 March 2018.

9 Carbon Brief, [COP24: Key outcomes agreed at the UN climate talks in Katowice](#), 16 December 2018.

10 United Nations Framework Convention on Climate Change, [“Annex: Gender action plan,” Gender and climate change: Draft conclusions proposed by the Chair — Recommendation of the Subsidiary Body for Implementation](#), Item 2, 13 November 2017.



## Intergovernmental Panel on Climate Change

The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 by the United Nations Environment Programme and the World Meteorological Organization. The IPCC supports the work of the parties to the UNFCCC by providing policymakers with regular assessments of the scientific basis of climate change, the impacts and future risks of climate change, and options for adaptation<sup>11</sup> and mitigation.<sup>12</sup> During this study, the IPCC published its “Special Report on Global Warming of 1.5°C,” which is discussed in detail below.

### b. Special Report on Global Warming of 1.5°C of the Intergovernmental Panel on Climate Change

On 8 October 2018, the IPCC released its *Special Report on Global Warming of 1.5°C* (the Special Report). The report was prepared at the invitation of the UNFCCC after the adoption of the *Paris Agreement* in 2015, to examine global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways. The IPCC agreed to consider these issues in the context of “strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty.”<sup>13</sup>

The Special Report outlines in detail the differences between the impacts of climate change if global warming is limited to an average of 1.5°C (above pre-industrial levels) and the impacts if it reaches 2°C. While these numbers reflect the global average, the report also notes that certain regions will experience greater warming, with the Arctic already experiencing warming two to three times higher than the average.<sup>14</sup>

The report’s findings reveal a stark difference between the two warming scenarios for biodiversity, stability, and human security. A rise to 2°C instead of 1.5°C is predicted, for

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11 “Climate change adaptation” refers to adjusting to the consequences of climate change, such as rising temperatures, more frequent and severe storms, etc.

12 “Climate change mitigation” refers to preventing further climate change, typically by reducing greenhouse gas emissions.

13 Intergovernmental Panel on Climate Change [IPCC], [“Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments,”](#) News release, 8 October 2018.

14 IPCC, [Global Warming of 1.5°C, an IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty, Summary for Policymakers](#) [Global Warming of 1.5°C, Summary for Policymakers], Incheon, Republic of Korea, 6 October 2018, p. 6.

example, to result in the loss of whole ecosystems, to more severely threaten fisheries and forests that have economic and cultural importance for many Canadian communities, and to result in the displacement of an additional 10 million people worldwide. For instance, a global average of 2°C of warming will increase the risk of forest fires and invasive species, and will result in the Arctic being ice-free on average once per decade, as opposed to once per century if warming is limited to 1.5°C.<sup>15</sup>

The Special Report uses the concept of a carbon budget: only a finite amount of carbon dioxide equivalent<sup>16</sup> can be in the atmosphere before global average temperatures rise beyond 1.5°C. This budget is being depleted by net global emissions, which are approximately 42 gigatonnes (Gt) of carbon dioxide (CO<sub>2</sub>) per year. At this rate, there are only 10-12 years remaining<sup>17</sup> before tipping points may be reached, major negative climate events will be much more frequent, and warming rates may increase dramatically.

To achieve the goal of limiting warming to 1.5°C, the report states that “rapid and far-reaching” transitions in land, energy, industry, buildings, transport, and cities would be required.<sup>18</sup> Several witnesses echoed this sense of urgency, citing the IPCC report in their testimony and stating that effective and faster mitigation is necessary to limit the consequences of climate change.<sup>19</sup> The report also finds that to stay below 1.5°C of warming, net global human-caused emissions CO<sub>2</sub> would need to fall by about 45 percent from 2010 levels by 2030, and would need to reach “net zero” by around 2050.<sup>20</sup>

Moreover, the Special Report concludes that most scenarios that limit global warming to 1.5°C would require net negative emissions and “the use of carbon dioxide removal

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15 IPCC, *Global Warming of 1.5°C, Summary for Policymakers*, pp. 9-10.

16 The unit “carbon dioxide equivalent” accounts for the respective atmospheric residence times and global warming potentials of non-CO<sub>2</sub> GHGs, such as methane, fluorinated gases, and nitrous oxide.

17 IPCC, *Global Warming of 1.5°C, Summary for Policymakers*, p. 14.

18 Ibid., p. 17.

19 ENVI, *Evidence*, 16 October 2018, 1705 (Laura Sacks, Group Leader and BC Coordinator, Nelson-West Kootenay Chapter, Citizens’ Climate Lobby); ENVI, *Evidence*, 18 October 2018, 1530 (Hari Balasubramanian); ENVI, *Evidence*, 25 October 2018, 1540 (Laurence Blandford, Director, International Policy Analysis, Center for Clean Air Policy); ENVI, *Evidence*, 30 October 2018, 1545 (Silvia Maciunas Deputy Director, International Environmental Law, Centre for International Governance Innovation).

20 IPCC, *Global Warming of 1.5°C, Summary for Policymakers*, p. 14.



(CDR)<sup>21</sup> on the order of 100–1000 Gt CO<sub>2</sub> over the 21st century.”<sup>22</sup> Many of the current CDR technologies are not well adapted to large-scale deployment, which would require vast amounts of resources such as land, energy and water.<sup>23</sup> Significant reductions in GHG emissions are thus important, to avoid overreliance on CDR technologies that do not yet exist.

### Recommendation 1

**The committee recommends that the Government of Canada, in light of the Special Report on Global Warming of 1.5°C of the Intergovernmental Panel on Climate Change, push for greater global ambition on GHG reductions, to accelerate the shift to a low carbon economy.**

### c. Canada’s reporting on greenhouse gas sources and sinks to the United Nations Framework Convention on Climate Change

As agreed in the United Nations Framework Convention on Climate Change (UNFCCC), which Canada ratified in 1992, Canada reports annually on its anthropogenic GHG sources and sinks.<sup>24</sup> Methodologies and guidelines for reporting are set out by experts from the Intergovernmental Panel on Climate Change (IPCC).<sup>25</sup> Parties to the UNFCCC report their emissions of seven GHGs: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>).<sup>26</sup> To account for the unique global warming potentials of each greenhouse gas, and to provide a common unit, greenhouse gases are reported in carbon dioxide equivalents (CO<sub>2</sub> eq).<sup>27</sup> The Government of Canada’s output-based

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21 CDR is defined in the IPCC Special Report as “Anthropogenic activities removing CO<sub>2</sub> from the atmosphere and durably storing it in geological, terrestrial, or ocean reservoirs, or in products. It includes existing and potential anthropogenic enhancement of biological or geochemical sinks and direct air capture and storage, but excludes natural CO<sub>2</sub> uptake not directly caused by human activities.” (p. 26).

22 IPCC, *Global Warming of 1.5°C, Summary for Policymakers*, p. 19.

23 Ibid.

24 Environment and Climate Change Canada, *National Inventory Report 1990-2016: Greenhouse Gas Sources and Sinks in Canada*, 2018, Part 1.

25 Ibid.

26 Ibid.

27 Environment and Climate Change Canada, *Global warming potentials*.

carbon pricing system covers emissions from all seven of the GHGs covered by the UNFCCC.<sup>28</sup>

The comparison of GHG emissions among countries can be complicated because of the numerous data sources, their relative completeness, and the time required for each country to compile and report on emissions data. For instance, the most current data for Canada's GHG emissions are from 2016, and were submitted to the UNFCCC in April 2018, according to the agreement among UNFCCC parties. For some countries, however, 2014 is the last year for which data are available. The following paragraphs and figures use data up to 2014 (the last year for which complete data is available) to compare global emissions, and up to 2016 for Canada's emissions alone.

#### **d. Canada's greenhouse gas emissions**

Canada was ranked as the world's ninth-largest GHG emitter in 2014, generating about 1.6% of global emissions in that year. The three largest emitters of GHGs in that year were, in descending order, China, the United States and India.<sup>29</sup> Figures 1 and 2 show total global GHG emissions in 2005 and 2014, and those of the world's 10 highest emitters.

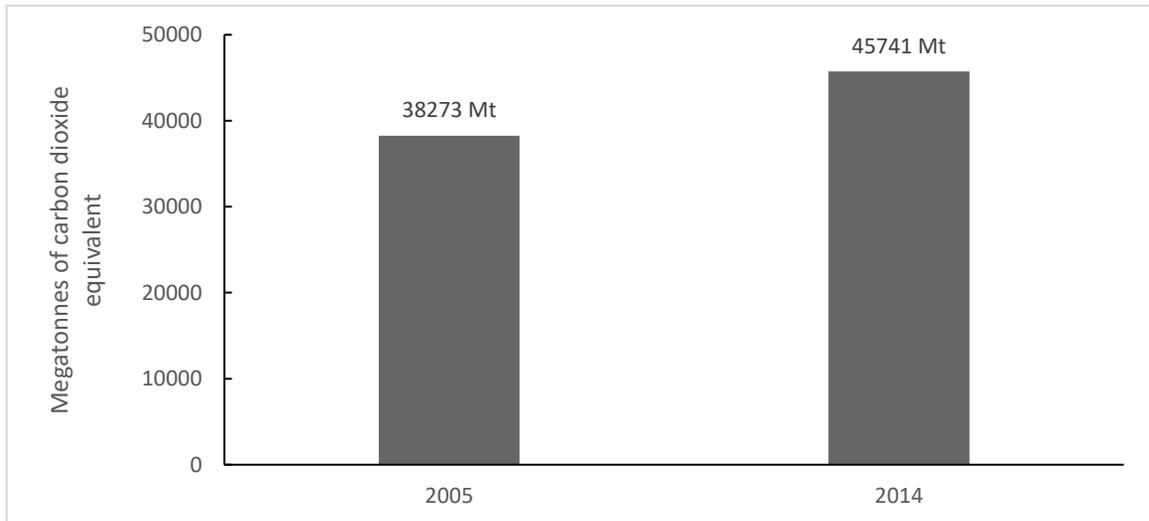
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28 Environment and Climate Change Canada, [\*Carbon pricing: regulatory framework for the output-based pricing system\*](#).

29 World Resources Institute, "[Total GHG Emissions Excluding Land-Use Change and Forestry - \[2005, 2014\]](#)" CAIT Climate Data Explorer (database), accessed 27 february 2019.

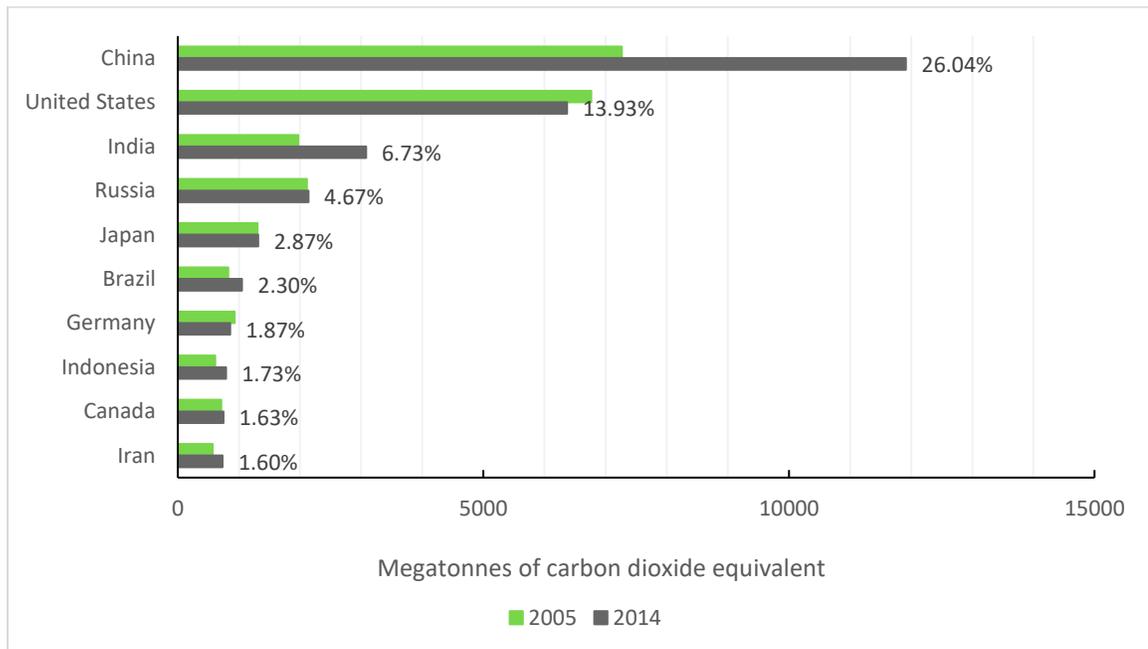


**Figure 1—Annual global greenhouse gas emissions, 2005 and 2014**



Source: Figure prepared by the Library of Parliament using data obtained from the World Resources Institute, "[Country Greenhouse Gas Emissions](#)," CAIT Climate Data Explorer (database), accessed 19 March 2019.

**Figure 2—Greenhouse gas emissions from the top 10 emitting countries, 2005 and 2014**



Source: Figure prepared by the Library of Parliament using data obtained from the World Resources Institute, “[Country Greenhouse Gas Emissions](#),” CAIT Climate Data Explorer (database), accessed 19 March 2019.

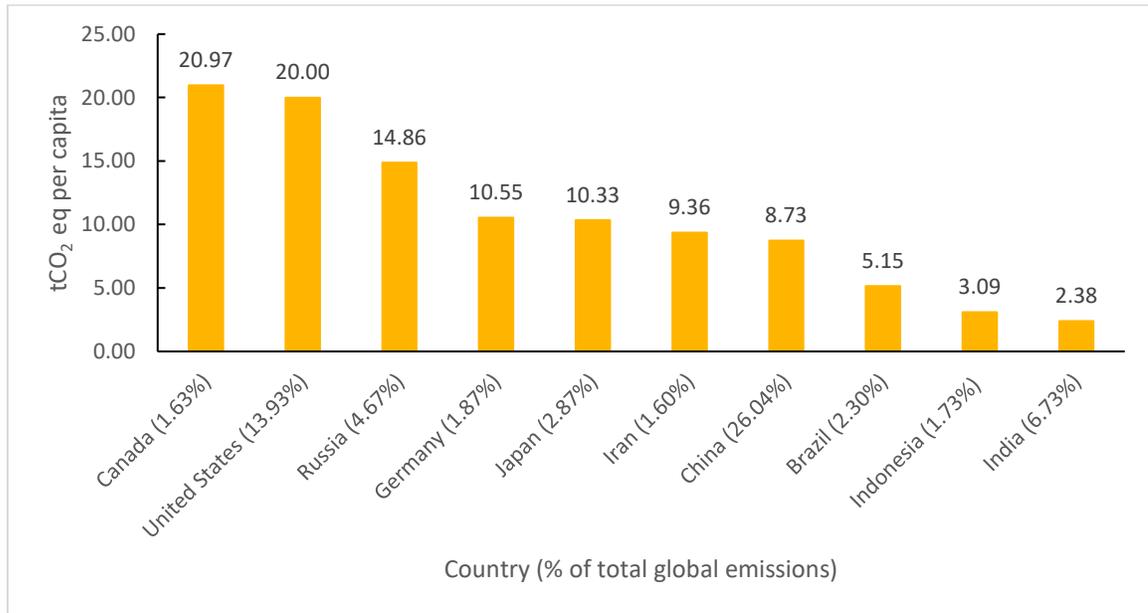
Carbon dioxide from the combustion of fossil fuels is the largest contributor to Canada’s GHG emissions, as is the case for many other industrialized nations.<sup>30</sup> Canada’s per capita emissions, at 19.4 tCO<sub>2</sub> eq per capita in 2016, are among the highest in the world.<sup>31</sup> Figures 3 and 4 show per capita emissions of the top 10 emitting countries overall, and from the 15 countries with the highest per capita GHG emissions. Figure 5 shows Canada’s emissions in 2016 by sector.

30 Environment and Climate Change Canada. Canada’s [National Reports to the United Nations Framework Convention on Climate Change \(2017\)](#).

31 World Resources Institute, “[Country Greenhouse Gas Emissions](#),” CAIT Climate Data Explorer (database), accessed 14 March 2019.

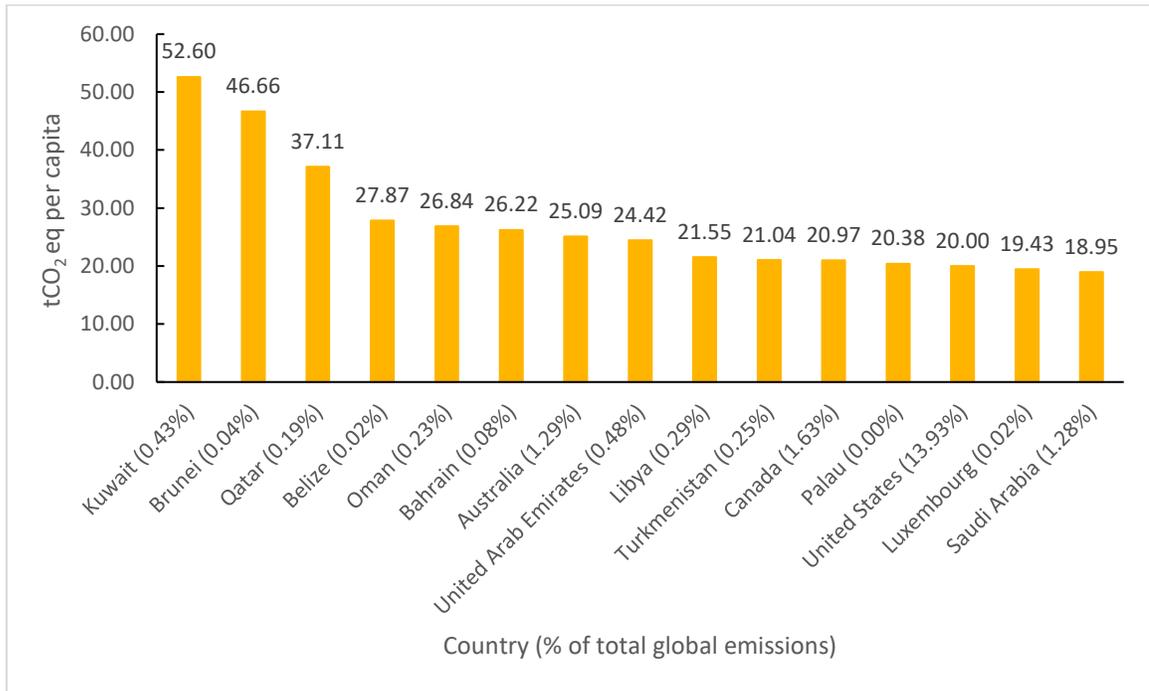


**Figure 3—Per capita emissions of the ten countries with highest total greenhouse gas emissions**



Source: Figure prepared by the Library of Parliament using data obtained from the World Resources Institute, "[Country Greenhouse Gas Emissions](#)," CAIT Climate Data Explorer (database), accessed 19 March 2019; and World Bank, "[Population, total](#)," World Development Indicators (database), accessed 19 March 2019.

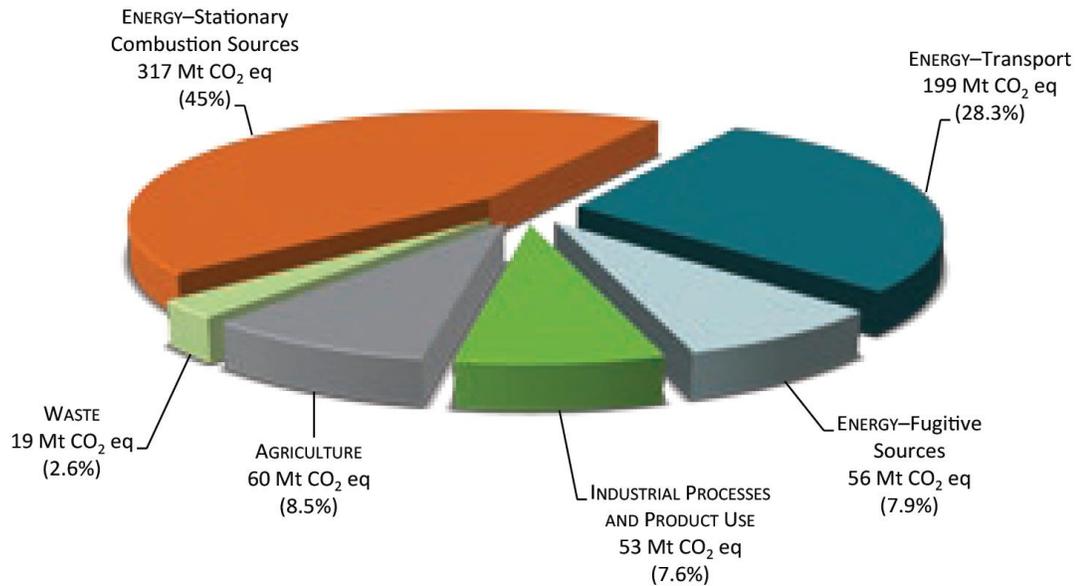
**Figure 4—Per capita emissions of the 15 countries with highest per capita greenhouse gas emissions**



Source: Figure prepared by the Library of Parliament using data obtained from the World Resources Institute, "[Country Greenhouse Gas Emissions](#)," CAIT Climate Data Explorer (database), accessed 19 March 2019; and World Bank, "[Population, total](#)," World Development Indicators (database), accessed 19 March 2019.



Figure 5—Canada’s emissions breakdown by IPCC sector (2016)



Source: Environment and Climate Change Canada. [National Inventory Report 1990-2016: Greenhouse Gas Sources and Sinks in Canada](#), 2018, Part 1.

Note: The IPCC defines the sectors as follows:<sup>32</sup>

**Energy—Stationary Combustion Sources:** includes fuel combustion in the manufacturing, construction, and energy industries, as well as commercial and residential sectors;

**Energy—Transport:** includes emissions from the mobile combustion of various fuel types during major transport activities (i.e., road, off-road, air, railways, and water-borne navigation);

**Energy—Fugitive Sources:** includes intentional or unintentional release of GHGs during the extraction, processing and delivery of fossil fuels to the point of final use;

**Industrial Processes and Product Use:** covers non-energy GHG emissions that result from manufacturing processes and the use of products;

**Agriculture:** covers non-energy GHG emissions relating to the production of crops and livestock; and

**Waste:** includes GHG emissions from the treatment and disposal of liquid and solid wastes.

32 IPCC, [2006 IPCC Guidelines for National Greenhouse Gas Inventories](#), 2006.

### e. Canada's international commitments on greenhouse gas emissions reductions

Canada has committed to GHG reductions in several UN agreements over the last 30 years. Canada's nationally determined contribution under the *Paris Agreement* is to reach emissions that are 30% below 2005 levels by 2030.<sup>33</sup> Canada's multi-faceted plan to meet its target is laid out in the Pan-Canadian Framework on Clean Growth and Climate Change (PCF).<sup>34</sup>

Figure 6 shows Canada's commitments made in Rio, Kyoto, Copenhagen and Paris, along with Canada's actual GHG emissions since 1990 and projected future emissions. It also indicates Canada's estimated emissions if measures from the PCF are implemented. Figure 6 shows that Canada's GHG emissions did not meet the Rio, Kyoto, or Copenhagen targets, and that measures contained in the PCF, while estimated to yield dramatic decreases in emissions, would not be sufficient for Canada to meet its Paris target.

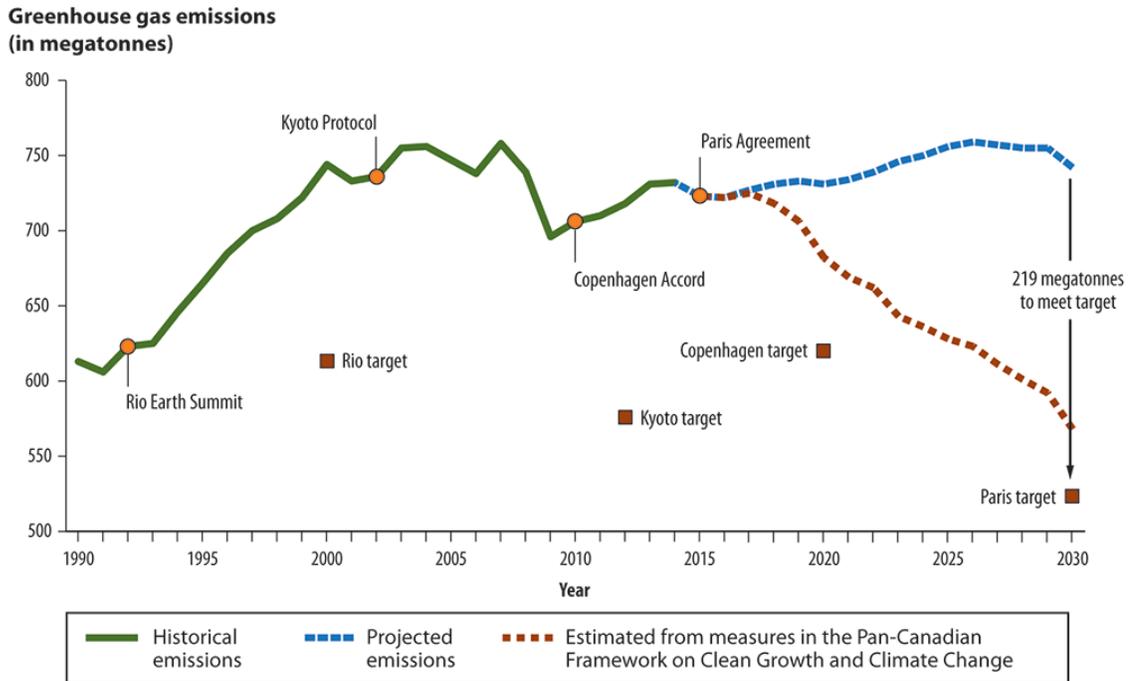
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33 *Government of Canada, [Canada's 2017 Nationally Determined Contribution Submissions to the United Nations Framework Convention on Climate Change](#).*

34 Governments of Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Alberta, British Columbia, Yukon, Northwest Territories, Nunavut, and Canada. 2016. [Pan-Canadian Framework on Clean Growth and Climate Change](#).



**Figure 6—Canada’s greenhouse gas emissions targets, and actual and projected emissions**



- Notes:
- a. Historical and projected greenhouse gas emissions are based on 2014 emission data presented in National Inventory Report 1990–2014: Greenhouse Gas Sources and Sinks in Canada, Environment and Climate Change Canada, 2016.
  - b. Estimates of greenhouse gas emission reductions from measures outlined in the Pan-Canadian Framework on Clean Growth and Climate Change are based on the National Inventory Report 1990–2015: Greenhouse Gas Sources and Sinks in Canada, Environment and Climate Change Canada, 2017.

Source: Office of the Auditor General of Canada, *Progress on Reducing Greenhouse Gases—Environment and Climate Change Canada*, Report 1 in 2017 Fall Reports of the Commissioner of the Environment and Sustainable Development to the Parliament of Canada.

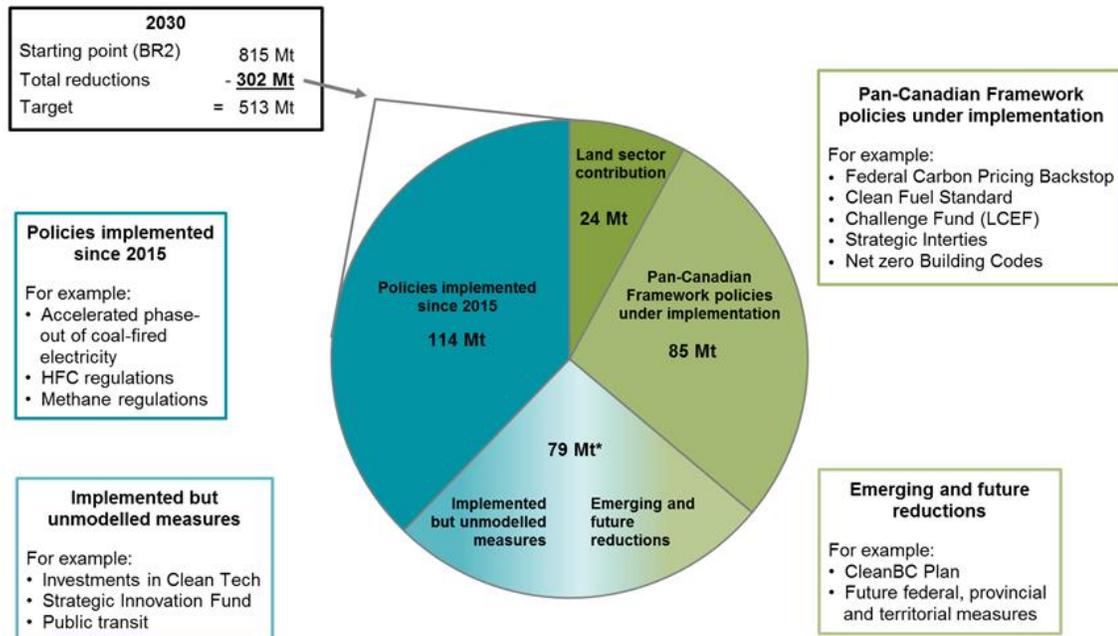
In January 2019, ECCC published an update on Canada’s projected greenhouse gas emissions reductions, illustrating how Canada is expected reach the target of 513 Mt CO<sub>2</sub> eq in the year 2030—a reduction of 302 Mt CO<sub>2</sub> eq from the estimated starting point of 815 Mt CO<sub>2</sub> eq. Figure 7 shows a total of 223 Mt CO<sub>2</sub> eq in estimated future reductions coming from the following sources:

- policies implemented since 2015 (114 Mt CO<sub>2</sub> eq)

- Pan-Canadian Framework policies being implemented (85 Mt CO<sub>2</sub> eq)
- Contributions from land use, land use change and forestry (24 Mt CO<sub>2</sub> eq)

Figure 7 highlights a gap of 79 Mt CO<sub>2</sub> eq. between the target and the estimated reductions. This gap is expected to be filled by reductions from implemented measures for which modelling is not yet complete, such as investments in clean technology, and reductions from other measures that are not yet in place, such as provincial and territorial policies. The gap was noted by several witnesses<sup>35</sup> in the study.

Figure 7—Projected emissions reductions in 2030



Source: Environment and Climate Change Canada, Canadian Environmental Sustainability Indicators: [Progress towards Canada's greenhouse gas emissions reduction target](#), January 2019.

Matt Jones of ECCC noted that there is still time to see what reductions result from the implementation of all PCF measures, and to make mid-course corrections as needed. He

35 E.g. ENVI, *Evidence*, 23 October 2018, 1745 (Isabelle Turcotte, Director, Federal Policy, Pembina Institute); ENVI, *Evidence*, 30 October 2018, 1600, (John Drexhage, Consultant, Drexhage Consulting).



pointed out that investments in clean technology may begin to bear fruit, and that the ability to drive emissions reductions may be greater and cheaper in the future.<sup>36</sup>

Several witnesses in the study also drew attention to the possibility that Canada might wish to use internationally transferred mitigation outcomes (ITMOs) to make up the difference between the emissions reductions achieved in Canada and Canada's target. This is discussed further in the section on ITMOs, below.

Catherine Abreu of Climate Action Network Canada expressed a sense of the urgency and importance of Canada meeting its Paris emissions reduction targets:

Since 1992, Canada has been making and breaking international commitments on climate change and that's why ... we are not currently a leader on climate change policies, but we are moving forward and we do have a chance at redemption. The Paris pledge is our fourth climate target and it is our moral obligation to get this one right. The world's scientists tell us that we have 12 years to cut global emissions in half.<sup>37</sup>

Laura Sacks of Citizens' Climate Lobby noted a similar sense of urgency, stating: "We need to take effective action, and very quickly, to stay under 1.5° C and also to avoid the worst damage."<sup>38</sup>

Matt Jones of ECCC described the process and context for the targets and the course correction that will happen in implementation of the PCF:

We're very much aware that achieving our Paris targets is only a step in the process, and it's not like we can declare victory after that step, because as the IPCC reminded us recently, and as we have known for a very long time, the total global reductions needed are far beyond those that are being contemplated at the moment.

The Paris Agreement requires a ratcheting down of targets in a regular cycle, and we have begun the process of looking beyond our current implementation of the [P]an-Canadian [F]ramework and our current target.<sup>39</sup>

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36 ENVI, *Evidence*, 16 October 2018, 1630 (Matt Jones, Assistant Deputy Minister, Pan-Canadian Framework Implementation Office, Department of the Environment).

37 ENVI, *Evidence*, 1 November 2018, 1630 (Catherine Abreu, Executive Director, Climate Action Network Canada).

38 ENVI, *Evidence*, 16 October 2018, 1705 (Laura Sacks).

39 Ibid., 1610 (Matt Jones).

Several witnesses recognized the significance of having such a thorough a climate plan and emphasized the importance of continuing to implement it.<sup>40</sup>

## **f. Canada's plan to address climate change: the Pan-Canadian Framework on Clean Growth and Climate Change**

The Pan-Canadian Framework on Clean Growth and Climate Change (Pan-Canadian Framework or PCF) was developed with the provinces and territories and in consultation with Indigenous peoples<sup>41</sup> and lays out federal, provincial, and territorial actions to meet Canada's commitments under the *Paris Agreement*<sup>42</sup> to reduce GHG emissions to 30% below 2005 levels by the year 2030. The Pan-Canadian Framework is built on four pillars: 1) carbon pricing; 2) complementary mitigation actions in all sectors of the economy (divided into seven thematic areas, of which international leadership is one); 3) adaptation and resilience; and 4) clean technology, innovation and jobs.

### **Pricing carbon pollution**

Carbon pricing is a central element of the PCF. The PCF outlines a federal benchmark for pricing carbon pollution. Provinces and territories can implement their own price-based system or cap-and-trade system, based on the needs and requirements in that jurisdiction. Each province or territory's system must meet the federal benchmark, or the federal backstop system will apply, taking effect in 2019.<sup>43</sup> The federal government's price-based system will return most of the revenues directly to households in each province or territory in which it applies. The federal system includes 1) a carbon levy applied to fossil fuels; and 2) an output-based pricing system for industrial facilities that

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40 E.g. ENVI, [Evidence](#), 1 November 2018, 1630 (Catherine Abreu); ENVI, [Evidence](#), 23 October 2018, 1735 (Keith Stewart, Senior Energy Strategist, Greenpeace Canada); ENVI, [Evidence](#), 18 October 2018, 1530 (Hari Balasubramanian, Managing Partner, EcoAdvisors); ENVI, [Evidence](#), 25 October 2018, 1535 (Anne-Raphaëlle Audouin, Representative, Canadian Council on Renewable Electricity).

41 Governments of Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Alberta, British Columbia, Yukon, Northwest Territories, Nunavut, and Canada. 2016. [Pan-Canadian Framework on Clean Growth and Climate Change](#).

42 Canada and 194 other countries party to the United Nations Framework Convention on Climate Change reached the *Paris Agreement* on December 12, 2015. Canada ratified the *Paris Agreement* on October 5, 2016.

43 Government of Canada, [Ministers' letter to provinces and territories on next steps in pricing carbon pollution](#), 20 December 2017.



emit above a certain threshold. This system is designed to support emissions-intensive, trade-exposed industries, to prevent carbon leakage.<sup>44</sup>

To implement this carbon pricing system, the federal government introduced the *Greenhouse Gas Pollution Pricing Act* in February 2018 (Part 5 of Bill C-74). It received royal assent in June 2018.<sup>45</sup>

Pricing carbon pollution is also a major feature of approaches to GHG reductions around the world. Currently, 46 jurisdictions around the world have carbon pollution pricing, with prices ranging from under \$US 1 to \$US 139, and 14% of global emissions are currently carbon-priced.<sup>46</sup> Isabelle Turcotte of the Pembina Institute noted that the carbon pricing component of the PCF is expected to “cut carbon pollution by 50 million to 60 million tonnes by 2022.”<sup>47</sup> To put this into perspective, she pointed out that to meet its Paris target, Canada needs to cut emissions by over 200 million tonnes. “We really can’t do it without carbon pricing,” she said.<sup>48</sup> Testimony the committee heard on carbon pricing is included in Section 3 of this report.

### Complementary mitigation actions

In addition to putting a price on pollution, the PCF lays out over 50 complementary measures,<sup>49</sup> such as regulations, programs, and funding, designed “to support a transition towards a better and low carbon future.”<sup>50</sup> Witnesses highlighted the importance of government measures such as the clean fuel standard,<sup>51</sup> methane

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44 Environment and Climate Change Canada, *Technical Paper on the Federal Carbon Pricing Backstop*, 18 May 2017, p. 5.

45 [Greenhouse Gas Pollution Pricing Act \(S.C. 2018, c. 12, s. 186\)](#).

46 ENVI, *Evidence*, 1 November 2018, 1625 (Christopher Ragan, Chair, Canada’s Ecofiscal Commission).

47 ENVI, *Evidence*, 23 October 2018, 1745 (Isabelle Turcotte).

48 Ibid.

49 ENVI, *Evidence*, 8 November 2018, 1610 (Nancy Hamzawi, Assistant Deputy Minister, Science and Technology Branch, Department of the Environment).

50 Environment and Climate Change Canada, [Pan-Canadian Framework on Clean Growth and Climate Change: Second Annual Synthesis Report on the Status of Implementation](#), December 2018.

51 ENVI, *Evidence*, 30 January 2019, 1700 (Joanna Kyriazis, Senior Policy Advisor, Clean Energy Canada); ENVI, *Evidence*, 28 January 2019, 1610 (David Sawyer, Senior Fellow, Smart Prosperity Institute).

regulations,<sup>52</sup> the phase-out of coal<sup>53</sup> and investments being made in grain infrastructure, transportation and clean technology.<sup>54</sup>

David Sawyer noted the importance of policy interactions, explaining, for example, that vehicle efficiency regulations and coal-fired power phase-out begun by the previous government “make it easier for the carbon price to do its job later on, because cars are more efficient and we’re using less fuel.”<sup>55</sup>

While the PCF lays out complementary actions in seven thematic areas, this study focuses on those related to international leadership.

The complementary mitigation actions related to international leadership laid out in the Pan-Canadian Framework include the following three new actions for the federal government:

- a) Climate Leadership: “The federal government will deliver on its historic commitment of \$2.65 billion by 2020 to help the poorest and most vulnerable countries mitigate and adapt to the adverse effects of climate change.”
- b) Internationally Transferred Mitigation Outcomes: “The federal government, in cooperation with provincial and territorial governments and relevant partners, will continue to explore which types of tools related to the acquisition of internationally transferred mitigation outcomes may be beneficial to Canada and will advance a robust approach to the implementation of article 6 of the Paris Agreement.”

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52 ENVI, [Evidence](#), 30 January 2019, 1640 (Joanna Kyriazis); ENVI, [Evidence](#), 23 October 2018, 1545 (Isabelle Turcotte); ENVI, [Evidence](#), 8 November 2018, 1610 (Nancy Hamzawi); ENVI, [Evidence](#), 28 January 2019, 1610 (David Sawyer).

53 ENVI, [Evidence](#), 30 January 2019, 1640 (Joanna Kyriazis); ENVI, [Evidence](#), 1 November 2018, 1635 (Catherine Abreu); ENVI, [Evidence](#), 16 October 2018, 1655 (Matt Jones).

54 ENVI, [Evidence](#), 30 January 2019, 1640 (Joanna Kyriazis).

55 ENVI, [Evidence](#), 28 January 2019, 1635 (David Sawyer).



- c) Trade and Climate Policy: “The federal government, in cooperation with provincial and territorial governments, will work with its international partners to ensure that trade rules support climate policy.”<sup>56</sup>

These actions are addressed in Section 4 below.

The set of complementary mitigation actions in the PCF is designed to reduce GHGs in ways that pricing carbon pollution could not. Matt Jones of ECCC noted that the PCF was developed with careful consideration of the evidence from around the world regarding what works to reduce emissions. In conducting the research that led to the measures planned in the PCF, he noted, officials

tried to look at every emission reduction opportunity for every greenhouse gas in every sector and every policy tool conceivable, and then drew from that menu to produce the PCF, and we tried to pick the right policy tool for the right source of emissions.<sup>57</sup>

In this study, the committee explored both the pricing of carbon pollution and the complementary mitigation actions laid out in the PCF on international leadership. The following section presents the testimony that was heard on pricing carbon pollution.

### 3. PRICING CARBON POLLUTION IN CANADA

Two special meetings were held as part of this study to look specifically at the policy of pricing carbon pollution, or “carbon pricing.”

Witnesses described how carbon pricing works, including its comparative cost, its impact on economic growth, and its effectiveness in reducing GHG emissions. They talked about the role of carbon pricing in stimulating innovation, and the importance of a long-term price signal. Witnesses also discussed two main issues that a national carbon pricing policy must address: impacts on international competitiveness of large emitters, and impacts on low-income and rural households. Witnesses from some industry groups discussed the challenges they face as carbon pricing is implemented in Canada, and finally, witnesses spoke about the role of Canada as an international leader when it comes to pricing pollution.

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56 Governments of Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Alberta, British Columbia, Yukon, Northwest Territories, Nunavut, and Canada, [Pan-Canadian Framework on Clean Growth and Climate Change](#), 2016.

57 ENVI, [Evidence](#), 8 November 2018, 1625 (Matt Jones).

## 1. Cost and effectiveness of pricing carbon pollution

Christopher Ragan of Canada’s Ecofiscal Commission explained the main reasons he supports carbon pricing, noting simply: “carbon pricing works. It works effectively to reduce greenhouse gas emissions.”<sup>58</sup> He explained that it is the most cost-effective approach to GHG reduction.

All of the witnesses who spoke about the comparative costs of various approaches to reducing GHG emissions named carbon pricing as the most economical mechanism; the mechanism with the lowest cost to Canadians.<sup>59</sup> According to representatives of the Citizens’ Climate Lobby, a steadily rising price on carbon pollution needs to be the foundation of any climate plan, as “it is the most cost-effective way to accelerate the transition to a cleaner economy and to produce innovative solutions.”<sup>60</sup>

Nicholas Rivers, Associate Professor at the University of Ottawa, described how carbon pricing works to reduce emissions and why it is the least expensive approach:

Economists consider a price on carbon to be the best approach to tackling greenhouse gas emissions, because it leverages the invisible hand of the market in reducing emissions. Without a carbon price in place, individuals and businesses have no incentive not to emit. They can use the atmosphere as a free waste dump. With an appropriate carbon price in place, individuals and businesses are given incentives to reduce their emissions. Likewise, a carbon price provides entrepreneurs with incentives to direct their research efforts toward low-carbon technologies. That helps make it cheaper in the future to reduce emissions....

Importantly, a carbon price provides lots of flexibility by allowing individuals and businesses to tailor their response to their own situation. This is a key feature that separates carbon pricing from a regulatory approach to reducing greenhouse gas emissions, and it is why carbon pricing is considered a much more cost-effective approach to reducing greenhouse gas emissions than a regulatory approach.<sup>61</sup>

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58 ENVI, [Evidence](#), 1 November 2018, 1625 (Christopher Ragan).

59 ENVI, [Evidence](#), 23 October 2018, 1710 (Isabelle Turcotte); ENVI, [Evidence](#), 28 January 2019, 1545 (Andrew Leach, Associate Professor, Alberta School of Business, University of Alberta); ENVI, [Evidence](#), 28 January 2019, 1555 (Dale Beugin, Executive Director, Canada’s Ecofiscal Commission); ENVI, [Evidence](#), 28 January 2019, 1550 (Nicholas Rivers, Associate Professor, University of Ottawa); ENVI, [Evidence](#), 1 November 2018, 1710 (Christopher Ragan).

60 ENVI, [Evidence](#), 16 October 2018, 1705 (Laura Sacks).

61 ENVI, [Evidence](#), 28 January 2019, 1550 (Nicholas Rivers).



A similar view on the reasons for supporting carbon pricing was offered by several other witnesses, including Andrew Leach, Dale Beugin, and Joanna Kyriazis.<sup>62</sup> For example, Mr. Beugin noted that “[c]arbon pricing can achieve a given level of emissions reductions at the lowest possible cost relative to [regulatory] alternatives. The reason it does so is that it creates flexibility for emitters. Individuals and businesses can make their own choices about how and when they reduce greenhouse gas emissions to avoid paying that carbon price.”<sup>63</sup> He added, “to achieve a given level of emissions reductions, regulations would require greater overall costs than would carbon pricing.”<sup>64</sup> Joanna Kyriazis called carbon pricing “the single most effective way to cut carbon pollution”<sup>65</sup> and pointed out that “[c]arbon pricing also drives growth in clean-tech and clean-energy sectors. It works by sending a market signal that directly impacts behaviour by rewarding those who make choices that reduce carbon pollution.”<sup>66</sup>

Todd Myers, of the Washington Policy Center in the United States suggested, in contrast, that carbon pricing was prone to political reversal and that a better approach would be to focus on supporting technologies that reduce CO<sub>2</sub> emissions and empower individual citizens to reduce their emissions. He favoured such an approach because he said it would “work with citizens’ interests rather than against them.”<sup>67</sup> Mr. Myers cited a U.S. study that showed that people were willing to pay “some price for the environment, but it has its limits”.<sup>68</sup> He also suggested that U.S. voters “don’t trust government to spend money wisely and they worry that promises won’t be kept.”<sup>69</sup>

All but one of the eleven witnesses heard during the two meetings on carbon pricing stated their support for a price on carbon pollution as a way to reduce emissions. Nicholas Rivers drew the committee’s attention to a recent statement in support of pricing carbon pollution, signed by “all four living former chairs of the U.S. Federal

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62 ENVI, [Evidence](#), 28 January 2019, 1545 (Andrew Leach,); ENVI, [Evidence](#), 28 January 2019, 1555 (Dale Beugin); ENVI, [Evidence](#), 30 January 2019, 1545 (Joanna Kyriazis).

63 ENVI, [Evidence](#), 28 January 2019, 1555 (Dale Beugin).

64 Ibid., 1600.

65 ENVI, [Evidence](#), 30 January 2019, 1545 (Joanna Kyriazis).

66 Ibid., 1550.

67 Ibid., 1605 (Todd Myers, Environmental Director, Washington Policy Center).

68 Ibid., 1600.

69 Ibid.

Reserve, by 27 Nobel laureate economists—that’s virtually every single living Nobel economist—and by 15 former chairs of the Council of Economic Advisers.”<sup>70</sup>

When asked about the impact of a carbon price on economic growth, witnesses explained that studies show continued positive economic growth with a carbon price, with growth becoming “very, very slightly, very modestly slower with carbon pricing,”<sup>71</sup> and they noted that the cost of regulations to the economy is greater:

[I]f we’re going to hit our emission reduction targets, the cheapest way to do so, the way that will impose the smallest impacts on growth, is through the carbon pricing approach. A regulatory approach would impose a bigger cost on growth than would a carbon pricing approach.<sup>72</sup>

Andrew Leach pointed out that other policies, unrelated to carbon pricing, can have much bigger costs to economies than carbon pricing,<sup>73</sup> while Mark Cameron pointed out that the carbon price on gasoline of four and a half cents a litre is relatively small—“we see fluctuations at that level every month, if not every week.”<sup>74</sup>

Although a carbon price was recognized as the most cost effective policy, Keith Stewart noted that there are “things that carbon pricing does really well and things it doesn’t, as well as things that regulations do well and ... things carbon pricing doesn’t.”<sup>75</sup> Isabelle Turcotte explained that, “in addition to the price embedded in a regulation, a regulation doesn’t provide industry with the flexibility to make investments on its own terms, to increase its energy efficiency and decrease its emissions and innovate, which is something that is offered through carbon pricing.”<sup>76</sup>

Christopher Ragan provided several examples of emissions reductions attributed to carbon pricing: In British Columbia in the first 5-6 years of the policy, there were 5%-15% reductions relative to what emissions would have been without a pricing policy. In the United Kingdom (U.K.), emissions have fallen more steeply than in the rest of the

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70 ENVI, [Evidence](#), 28 January 2019, 1550 (Nicholas Rivers).

71 E.g. ENVI, [Evidence](#), 28 January 2019, 1710 (Dale Beugin).

72 ENVI, [Evidence](#), 28 January 2019, 1710 (Nicholas Rivers).

73 Ibid., 1710 (Andrew Leach).

74 Ibid., 1715 (Mark Cameron, Executive Director, Clean Prosperity).

75 ENVI, [Evidence](#), 23 October 2018, 1705 (Keith Stewart).

76 Ibid., 1710 (Isabelle Turcotte).



European Union due to the U.K.-specific carbon tax, and California’s cap and trade system is resulting in emissions reductions.<sup>77</sup>

When asked whether the absence of an absolute decrease in emissions in a jurisdiction with carbon pricing was a sign that carbon pricing was not working, witnesses noted that the impact of a policy should be judged by what might have happened without that policy in place, and it should be judged in context, e.g. of population growth, other policies, etc. In the case of British Columbia, Joanna Kyriazis stated that “there’s overwhelming evidence that having a carbon tax in place significantly bent the curve downwards and led to less emissions than would have been produced had there not been a carbon tax in place.”<sup>78</sup> Other witnesses confirmed that British Columbia’s carbon price had resulted in a decrease in GHG emissions compared with a scenario with no carbon price.<sup>79</sup>

Some committee members expressed the concern that emissions reductions in jurisdictions with carbon pricing were insufficient to meet Canada’s targets. Witnesses explained their view that this is just the beginning of carbon pricing and part of how it works is through the long-term signal to businesses that emissions must be reduced.<sup>80</sup>

In terms of what price on carbon would be needed to yield emissions reductions, Dale Beugin explained, “[l]ower carbon prices will drive lower emissions reductions. Higher carbon prices will drive higher emissions reductions.”<sup>81</sup> David Sawyer also explained that reductions are determined by interactions between different policies—regulations, subsidies, and pricing all work together to decrease emissions.<sup>82</sup>

## Policy interaction

Witnesses talked about finding the right combination of policies to get the greatest emissions reductions. Chris Ragan suggested finding the lowest-cost options to reduce emissions, noting that there are non-pricing policies that do support a carbon price, but

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77 ENVI, [Evidence](#), 1 November 2018, 1625 (Christopher Ragan).

78 ENVI, [Evidence](#), 30 January 2019, 1640 (Joanna Kyriazis).

79 E.g. ENVI, [Evidence](#), 1 November 2018, 1625 (Christopher Ragan), ENVI, [Evidence](#), 28 January 2019, 1550, 1645 (Nicholas Rivers), ENVI, [Evidence](#), 28 January 2019, 1720 (Dale Beugin).

80 ENVI, [Evidence](#), 16 October 2018, 1715 (Laura Sacks); ENVI, [Evidence](#), 23 October 2018, 1615 (Isabelle Turcotte); ENVI, [Evidence](#), 25 October 2018, 1610 (Patrick Bateman, Representative, Canadian Council on Renewable Electricity).

81 ENVI, [Evidence](#), 28 January 2019, 1635 (Dale Beugin).

82 Ibid., 1635 (David Sawyer).

not all policies complement it: “I would encourage policy-makers not to just go for the multi-faceted approach, but to go for the low-cost package,” he said.<sup>83</sup>

Joanna Kyriazis described some of the current policies that contribute to GHG emissions reductions in Canada, noting “carbon pricing is a key part of a policy package, ... but some of the other policies that the federal government is pursuing: the clean fuel standard is a very important one; methane regulations that were introduced; the coal phase-out; and in addition, the large investments that are being made in grain infrastructure, transportation and clean technology.... It’s important to approach this problem from multiple angles.”<sup>84</sup>

Keith Stewart pointed out that some actions that yield decreased emissions in the shorter term, like switching from coal to natural gas, may not help to get to very low emissions by 2050. In contrast, he noted that other actions, like requiring net-zero emissions new buildings, would not yield the first 10% of reductions, but will be essential in the long term.<sup>85</sup>

### **Long-term price signal to stimulate innovation**

Patrick Bateman said that his organization, the Canadian Council on Renewable Electricity (CanCORE), believes that “a pan-Canadian clean, fair and effective price signal with long-term policy certainty that shifts investment over time away from emitting toward non-emitting electricity generation sources is our single largest critical success factor for climate action.”<sup>86</sup>

Carbon pricing serves to motivate businesses to find new, less-emitting ways of doing business. According to Chris Ragan, “over the longer haul, a key part of carbon pricing is that it drives innovation. In fact, I would argue that the number one way to energize the business model of the clean-tech sector isn’t to use government subsidies or government support, which I think has many problems, but to put a nice, clean, predictable rising carbon price in place. That will drive innovation and support the clean-

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83 ENVI, *Evidence*, 1 November 2018, 1715 (Christopher Ragan).

84 ENVI, *Evidence*, 30 January 2019, 1700 (Joanna Kyriazis).

85 ENVI, *Evidence*, 23 October 2018, 1705 (Keith Stewart).

86 ENVI, *Evidence*, 25 October 2018, 1535 (Patrick Bateman).



tech sector.”<sup>87</sup> Other witnesses also highlighted the importance of the price signal for driving innovation.<sup>88</sup> As Dale Beugin put it:

I think expectations of future carbon prices are exactly what businesses want. They want certainty to make those long-lasting investment choices and to know how they will pay off. I think there’s also an expectation that carbon constraints elsewhere are only going to increase as other jurisdictions start to get moving, get more aggressive in how they move, and maybe even begin to impose their own border measures.<sup>89</sup>

Because the predictability of a gradually rising carbon price drives investment decisions, shifts in policy can have a negative effect on businesses: For example, in Australia, when the carbon tax was cancelled, “policy certainty was lost and companies that had been making investments for a carbon-pricing environment lost out.”<sup>90</sup>

Several witnesses spoke about the different ways that revenues from carbon pricing could be used. For example, the collected revenues can be returned to individual households to mitigate cost increases, or used in a climate fund for emission-reduction initiatives. Patrick Bateman was not concerned about how revenues were used. “[T]hat price signal is the most important part,” he said.<sup>91</sup> Laura Sacks of the Citizens’ Climate Coalition echoed this priority, describing long-term price signalling as “really important.”<sup>92</sup>

## Clean technology and clean energy: Financial opportunities for Canadian businesses in a low-carbon future

Chris Turner described a global energy transition that is gaining significant momentum as primary energy sources shift to renewables. Given that three quarters of Canada’s electricity grid comes from non-emitting sources already, he noted, Canada has opportunities because businesses that are trying to shrink their GHG footprint will be attracted to Canada.<sup>93</sup> Although the transition may be challenging for parts of Canada’s established resource sector, it is also “an extraordinary, once-in-a-generation

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87 ENVI, [Evidence](#), 1 November 2018, 1625 (Christopher Ragan).

88 E.g. ENVI, [Evidence](#), 28 January 2019, 1655 (Dale Beugin); 1545 (Andrew Leach), ENVI, [Evidence](#), 30 January 2019, 1635 (Joanna Kyriazis).

89 ENVI, [Evidence](#), 28 January 2019, 1655 (Dale Beugin).

90 ENVI, [Evidence](#), 23 October 2018, 1710 (Isabelle Turcotte).

91 ENVI, [Evidence](#), 25 October 2018, 1610 (Patrick Bateman).

92 ENVI, [Evidence](#), 16 October 2018, 1715 (Laura Sacks).

93 ENVI, [Evidence](#), 30 October 2018, 1550 (Chris Turner, as an individual).

opportunity both for those traditional resource sectors to rethink some of the things they're doing, and obviously, for the economy as a whole to become a global player in this emerging market."<sup>94</sup> He recommended that government take an active role in promoting early stage development of clean tech, partly due to the structural barriers to entering the clean-tech marketplace (e.g. insufficient infrastructure; split incentives), which governments can help address. He said:

[W]e are very good in Canada at early stage development of clean technology. We have very good research facilities, very good universities, smart people, strong institutions, all that stuff, but we are failing with troubling regularity to get these ideas from lab to marketplace. Our global share of the clean-tech market in recent years has declined, something in the order of 40% at last check, and in large part this is because the ideas are being turned into commercial properties outside of Canada.<sup>95</sup>

This was echoed by Michael Andrade of the Council of Canadian Innovators, who suggested that among the things Canada needs to do "in order to become a leader—and we are not now, in absolute size or in technological advancement—will be to focus much more on the commercialization of the ideas we have, so that they can be scaled up into competitive, export-led industries."<sup>96</sup>

## Recommendation 2

**The committee recommends that the Government of Canada promote Canada's clean energy sources as a means to attract international investment and position Canada as a location for low-emission industrial production and technology development.**

Businesses can benefit from the implementation of carbon pricing, according to Hari Balasubramanian: "If we take a front-leaning position on our policies as a country and on our footprint internationally for companies that operate in the international space, we'll be ahead of the game on the regulatory environment in countries where we operate. It gives [Canadian companies] more access to markets and opportunities in emerging markets."<sup>97</sup>

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94 ENVI, *Evidence*, 30 October 2018, 1545 (Chris Turner).

95 *Ibid.*, 1550.

96 ENVI, *Evidence*, 1 November 2018, 1710 (Michael Andrade, Chief Executive Officer, Morgan Solar Incorporated, Council of Canadian Innovators).

97 ENVI, *Evidence*, 18 October 2018, 1620 (Hari Balasubramanian).



According to Dale Beugin, “getting ahead of the curve and reducing emissions more now rather than later can improve Canada’s competitiveness in a carbon-constrained world.”<sup>98</sup>

John Drexhage pointed out that Canada’s strengths include long experience in supplying renewable energy. “[T]he expertise that we’ve had on hydro over the years with Hydro Quebec, Manitoba, BC Hydro, etc., is enormous.”<sup>99</sup>

Several witnesses also explained that a predictable, rising price on carbon provides a clear signal to companies and supports their investments in clean technology and innovation.<sup>100</sup> As Andrew Leach noted, “[e]conomists ... consistently find that price-based policies provide better incentives for innovation than do regulations, and they come without the expense of direct subsidies.”<sup>101</sup>

Joanna Kyriazis explained how carbon pricing drives growth in the clean technology and clean energy sectors. A price on carbon, she argued, incentivizes clean solutions like heat pumps, energy storage, renewable natural gas, and energy efficiency. Through this price, “Canada is helping to grow its clean-tech industry, the global market for which is now estimated to be worth more than \$5.8 trillion and growing. That is bigger than Japan’s GDP, the third-largest economy in the world.” She pointed out that twelve Canadian companies appeared in the 2019 Global Cleantech 100 list, which is an annual guide to the world’s top 100 companies in green technology innovation.<sup>102</sup>

### Recommendation 3

**The committee recommends that the Government of Canada provide policy certainty to Canadian businesses and spur low carbon innovation by ensuring that the price signal of carbon pricing remains intact.**

## 2. Implementation considerations

Christopher Ragan described two main areas where accompanying policies are needed to address known concerns: unfair impacts on certain households and business

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98 ENVI, *Evidence*, 28 January 2019, 1655 (Dale Beugin).

99 ENVI, *Evidence*, 30 October 2018, 1405, (John Drexhage).

100 E.g. ENVI, *Evidence*, 28 January 2019, 1545 (Andrew Leach); ENVI, *Evidence*, 30 January 2019, 1615 (Joanna Kyriazis).

101 ENVI, *Evidence*, 28 January 2019, 1545 (Andrew Leach).

102 ENVI, *Evidence*, 30 January 2019, 1550 (Joanna Kyriazis).

competitiveness. For each of these challenges, he explained, there is a policy solution to address it head-on.<sup>103</sup>

## Household impacts

Returning revenues to households, which can be done in various different ways, maintains household purchasing power while still driving behavioural change through pricing.<sup>104</sup> The federal backstop legislation addresses this through rebates to households,<sup>105</sup> and Mark Cameron noted a study showing that eight out of 10 Ontario households, for example, were expected to benefit overall from that rebate.<sup>106</sup>

Todd Myers noted, on the other hand, that not everyone can adjust to carbon prices, as alternatives may be costly or unavailable. “For those who see no path to avoiding the taxes, a carbon price doesn’t mean helping the environment; it simply means more taxes.”<sup>107</sup> Mr. Myers suggested that, given that two thirds of Canada’s emissions come from small emitters, the focus should be on helping people change their behaviour to emit less. Technologies can bring down the cost of emissions reductions, and he believes that “[l]owering the cost for individuals to reduce their emissions is key to any successful CO<sub>2</sub> reduction strategy,” partly because “[t]hese technology changes are not subject to the ebb and flow of politics.”<sup>108</sup>

## Competitiveness

For competitiveness, output-based allocations, as contained in the federal backstop and Alberta’s carbon pricing system, are designed to give large emitters an incentive to reduce their emissions but not their activity within the jurisdiction and to maintain the price signal. The design of these policies, Chris Ragan noted, is “tough to explain”<sup>109</sup> and not everyone understands how they work. Michael Binnion criticized output-based allocations because he said the complex and opaque regulations are vulnerable to

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103 ENVI, [Evidence](#), 1 November 2018, 1625 (Christopher Ragan).

104 Ibid.

105 ENVI, [Evidence](#), 28 January 2019, 1705 (Dale Beugin).

106 Ibid., 1605 (Mark Cameron).

107 ENVI, [Evidence](#), 30 January 2019, 1600 (Todd Myers).

108 Ibid., 1600.

109 ENVI, [Evidence](#), 1 November 2018, 1625 (Christopher Ragan).



manipulation and politicization.<sup>110</sup> Andrew Leach noted the serious competitiveness concerns, in resource-dependent provinces in particular, and explained that it is possible to fully address these concerns with an output-based allocation of emissions credits, to maintain the price signal on emissions (which gives firms a reason to innovate) without reducing profitability.<sup>111</sup> Several others supported this assertion.<sup>112</sup>

### 3. Industry perspectives

The committee heard from Peter Boag, President and Chief Executive Officer of the Canadian Fuels Association (CFA), that his association supports a price on carbon pollution so long as it adheres to certain principles. The CFA approves of the clarity, predictability, and transparency of the current carbon pricing system. Mr. Boag noted, however, that the current federal backstop does not adhere to three of the CFA's other principles: CFA believes emissions reduction targets should be "challenging but feasible," but Mr. Boag noted that "[f]or Canada's refining sector, the 80% benchmark [set in the federal carbon pricing backstop] corresponds to an emissions performance that even the best performing refineries in the world would struggle to achieve."<sup>113</sup> As a result, refineries would be forced to "pay their way out" of not meeting their performance targets, which, he argued, would mean that "setting those infeasible targets will divert investment away to pay a carbon tax, and away from process and technology improvements that would actually reduce emissions."<sup>114</sup>

Other concerns expressed by CFA were related to equity and carbon leakage. Mr. Boag noted that the patchwork of carbon pricing approaches across Canada creates inequity, citing a study showing that refineries in provinces where the federal backstop applies would be subject to substantially greater carbon price impacts than refineries in non-backstop jurisdictions such as Quebec. Because all Canadian refineries compete in the same market, the result would be carbon leakage and potential closure of refineries, with concomitant job losses.<sup>115</sup>

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110 ENVI, *Evidence*, 25 October 2018, 1550 (Michael Binnion, as an individual).

111 ENVI, *Evidence*, 28 January 2019, 1545 (Andrew Leach, Associate Professor, Alberta School of Business, University of Alberta).

112 ENVI, *Evidence*, 23 October 2018, 1545 (Isabelle Turcotte); ENVI, *Evidence*, 25 October 2018, 1535 (Patrick Bateman); ENVI, *Evidence*, 1 November 2018, 1625 (Christopher Ragan).

113 ENVI, *Evidence*, 30 January 2019, 1540 (Peter Boag, President and Chief Executive Officer, Canadian Fuels Association).

114 *Ibid.*, 1535.

115 *Ibid.*, 1540.

Massimo Bergamini, President and Chief Executive Officer of the National Airlines Council of Canada, stated “the National Airlines Council of Canada fully supports putting a price on carbon—or as some prefer, a price on pollution—including on carbon emissions from commercial aviation.”<sup>116</sup> His colleague Geoffrey Tauvette affirmed that “market-based mechanisms should be the centrepiece of every carbon reduction strategy.”<sup>117</sup> They asserted, however, that a carbon tax does not make sense for the airline industry. Mr. Tauvette explained that Canadian aviation has improved its fuel efficiency dramatically in recent years (by 16% between 2008 and 2016) and is already using best-in-class, fuel-efficient aircraft.<sup>118</sup> This means, in his words, “a carbon tax will simply not incentivize us to get further fuel savings and will do nothing further to help us cut and reduce our emissions.”<sup>119</sup>

Massimo Bergamini stated that a carbon tax would add, in 2022, \$150 to the cost for a family of four to fly from Ottawa to Vancouver, noting that this kind of cost would have a “dampening effect ... on a domestic tourism sector which ... already struggles because of the high cost of air travel.”<sup>120</sup> He said of a carbon tax, “[w]e believe it would exacerbate commercial and emission leakage, curb growth in the visitor economy, and as it is currently slated to be rolled out, would cause significant market distortions.”<sup>121</sup> A preferable approach, according to Mr. Bergamini, would be a domestic carbon offset system comparable to the international model, and he suggested that domestic policy should align with the 2016 CORSIA [Carbon Offsetting and Reduction Scheme for International Aviation] agreement, in which airlines will be allowed to purchase offsets to help them meet their goal of carbon-neutral growth [after 2020].<sup>122</sup>

Mr. Bergamini also noted the “breakthrough potential of commercially available biojet in contributing to decarbonization of air travel,”<sup>123</sup> noting that Canada has potential advantages in biojet and biofuel development but has not emphasized this to date.

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116 Ibid., 1555 (Massimo Bergamini, President and Chief Executive Officer, National Airlines Council of Canada).

117 Ibid., 1555 (Geoffrey Tauvette, Director, Fuel and Environment, WestJet, Environment Committee).

118 Ibid.

119 Ibid.

120 Ibid., 1555 (Massimo Bergamini).

121 Ibid.

122 Ibid., 1705 (Geoffrey Tauvette).

123 Ibid., 1555 (Massimo Bergamini).



Tyler McCann, of the Grain Growers of Canada, underscored the important economic role played by grain farmers in rural communities,<sup>124</sup> and highlighted increasing efficiencies in Canadian grain farming: Using minimum-till or no-till farming, precision agriculture, 4R nutrient stewardship, and biotechnology, Canada farmers are growing “the world’s safest, highest-quality and most sustainable grains and oilseeds.”<sup>125</sup> As he put it, “[a]t a time when grain production [in Canada] is reaching record highs, its carbon emissions are reaching new lows.”<sup>126</sup> Mr. McCann emphasized that Canada’s grain farmers depend on exports and noted the importance of maintaining a level playing field with their international competitors. His organization welcomed the confirmation that gas and diesel used on farms would be exempted from the federal carbon price backstop, but he explained that the propane and natural gas used for grain dryers were not exempt and that grain dryers were essential in wet harvest seasons. Mr. McCann finished by saying that “[p]roviding additional relief will not impact growers’ commitments to reducing GHG emissions. Growers are already doing that, and they will continue to work hard to grow more with less.”<sup>127</sup>

Mr. McCann also highlighted Canada’s founding role in the Global Research Alliance on Agricultural Greenhouse Gases, an organization that has been leading international efforts to coordinate and collaborate on research to reduce GHG emissions from agriculture.<sup>128</sup>

#### **Recommendation 4**

**The committee recommends that the Government of Canada permit airlines to purchase offsets, managed within a transparent and robust governance regime, to help meet their greenhouse gas emissions targets.**

#### **Recommendation 5**

**The committee recommends that the Government of Canada further incentivize the development and commercialization of low-greenhouse-gas-emission airline fuels.**

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124 ENVI, *Evidence*, 23 October 2018, 1550 (Tyler McCann, Interim Executive Director, Grain Growers of Canada).

125 Ibid.

126 Ibid., 1555.

127 Ibid., 1600.

128 Ibid., 1555.

## 4. Policy leadership

Several witnesses noted the international importance of Canada's leadership role in carbon pricing. According to Nicholas Rivers, "[t]he approach Canada has adopted builds on 15 years of international experience with carbon pricing. It places Canada in the vanguard of jurisdictions that are seriously trying to tackle carbon emissions."<sup>129</sup> David Sawyer said "Canada has a leading policy architecture that is the envy of the world and that people are looking towards,"<sup>130</sup> noting that on a visit to the Organisation for Economic Co-operation and Development (OECD), he found that people were curious about Canada's combination of carbon pricing, regulations, innovation subsidy programs, and methane controls: "[T]he ability to tune those to deeper decarbonization is really what people are looking at globally."<sup>131</sup> Mark Cameron stated that "what Canada is doing with carbon pricing under the [Pan Canadian] [F]ramework, and the federal backstop legislation that ensures its consistency across the country, is in fact an internationally significant precedent."<sup>132</sup>

Pointing out that Canada is the top emitter per capita in the G20, and one of the world's top economies, Joanna Kyriazis asserted that Canada's GHG emissions, although less than 2% of global emissions, do matter in the global context, and pointed out how Canada can lead:

The best thing we can do, if we would like to get other nations on board with this sort of action, is to design and implement a world-leading carbon pricing system and produce the clean technologies that we need not only to reduce our own emissions and grow our economy but also to export those technologies abroad and help the rest of the world meet its emissions goals as well.<sup>133</sup>

### Recommendation 6

**The committee recommends that the Government of Canada take a leadership role in supporting clean technology development, not only to reduce emissions and grow the economy in Canada, but also to help other countries meet their emissions reductions goals.**

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129 ENVI, *Evidence*, 28 January 2019, 1555 (Nicholas Rivers).

130 Ibid., 1715 (David Sawyer).

131 Ibid., 1715 (Nicholas Rivers).

132 Ibid., 1600 (Mark Cameron).

133 ENVI, *Evidence*, 30 January 2019, 1625 (Joanna Kyriazis).



Dale Beugin agreed that it is important for Canada to act:

If Canada is not taking action to reduce its greenhouse gas emissions, what reason do we have to expect that other countries would do the same? That is exactly the nature of the collective action problem that is climate change. Only by all taking action can we address the significant costs and risks that arise from climate change.<sup>134</sup>

To put the costs of climate action into perspective, Joanna Kyriazis pointed out the very high costs of delaying or failing to act. For example, she noted that damages caused by extreme weather events in Canada in 2018 cost \$1.9 billion in insured losses; summer storms across the Prairies caused more than \$240 million in damage, and one major rain event in Toronto cost more than \$80 million.<sup>135</sup>

Several witnesses framed Canada's approach to carbon pricing as a sign of leadership internationally and a step towards a global price on carbon. Hari Balasubramanian saw Canada's carbon pricing as an essential example of international leadership:

[I]f there's no universal price on carbon around the world, you're going to have market failures in certain aspects. By taking a leadership position and having a price on pollution in Canada, we need to encourage that group of 45 national jurisdictions that already have a price on pollution to turn into a group of 150 or 187, however many are represented globally.<sup>136</sup>

Chris Turner pointed to the widespread recognition of the importance of carbon pricing:

One thing I would say on the subject of international leadership is that most—in fact, all, I think—of the international organizations have looked at this thing ... and said that one of the best mechanisms, one of the essential mechanisms for the global response to climate change is going to be a price on carbon. There is pretty widespread, non-partisan agreement that it is a key instrument.<sup>137</sup>

Mark Cameron, Executive Director, Clean Prosperity, noted that “[g]etting carbon pricing and the federal backstop right over the next few years is a key piece of Canada's international leadership on carbon pricing.”<sup>138</sup> He noted that if Canada fails to build national-scale carbon pricing, this may discourage further international action.<sup>139</sup>

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134 ENVI, *Evidence*, 28 January 2019, 1650 (Dale Beugin).

135 ENVI, *Evidence*, 30 January 2019, 1540 (Joanna Kyriazis).

136 ENVI, *Evidence*, 18 October 2018, 1625 (Hari Balasubramanian).

137 ENVI, *Evidence*, 30 October 2018, 1630 (Chris Turner).

138 ENVI, *Evidence*, 28 January 2019, 1605 (Mark Cameron).

139 *Ibid.*, 1600.

### Recommendation 7

**The committee recommends that the Government of Canada maintain Canada’s position as a global leader in pricing carbon pollution and work with other countries to expand the number of jurisdictions pricing carbon.**

## 5. Climate policy as a non-partisan issue

Laura Sacks, of the Citizens’ Climate Coalition, noted that in some jurisdictions, such as the U.K., there has been agreement to make climate policy a non-partisan issue. They decide “to use a certain method to reduce emissions and get on with it, so that it’s not flipflopping with a strong policy that is then removed. We want to build bridges between parties so that we can have long-term certainty in a carbon price,”<sup>140</sup> she added.

Catherine Abreu of the Climate Action Network-Canada agreed, commenting that “while climate action might be a political issue that is ... very worthy of active debate, it should not be a partisan issue.”<sup>141</sup>

### Recommendation 8

**The committee recommends that the Government of Canada work towards making climate policy a non-partisan issue.**

## 4. PLANNED COMPLEMENTARY ACTIONS ON INTERNATIONAL LEADERSHIP

In addition to hearing about pricing carbon pollution, the committee heard evidence related to the three action areas laid out in the PCF under international leadership. This evidence is discussed in this section.

Several witnesses noted that the implementation of the PCF itself represented international leadership.<sup>142</sup> The committee heard from many witnesses that the implementation of this framework is a major step forward for Canada, and a crucial part

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140 ENVI, *Evidence*, 16 October 2018, 1715 (Laura Sacks).

141 ENVI, *Evidence*, 1 November 2018, 1655 (Catherine Abreu).

142 E.g. ENVI, *Evidence*, 23 October 2018, 1630 (Isabelle Turcotte); ENVI, *Evidence*, 28 January 2019, 1600 (Mark Cameron).



of Canada's ability to meet its emissions reduction targets: As Anne-Raphaëlle Audouin explained,

with the [P]an-Canadian [F]ramework we now have a national climate strategy for the first time. We have all the targets and goals we need. The pathway to fulfilling this strategy will create significant economic development and job creation opportunities domestically. Our national leadership will translate to huge opportunities globally in the clean energy economy. Now we need to move from climate planning to climate action, though. It's time to focus on getting implementation of the [P]an-Canadian [F]ramework right.<sup>143</sup>

Several witnesses talked about the importance of implementing the PCF, of giving it some time, and of making course corrections as needed,<sup>144</sup> noting that this would be the first plan Canada has had that has been seriously implemented: John Drexhage commented that despite having had a national action program on climate change as far back as 1994, as a country "we have not really come a heck of a lot further in terms of actual implementation since then. I would just like to really see some constructive first steps to take us on our way, instead of trying to provide an overall, comprehensive solution right off the bat in order to make anything happen."<sup>145</sup>

According to Isabelle Turcotte of the Pembina Institute, "Canada's credibility on climate on the international stage really rests on its ability to successfully implement the PCF, the climate action plan, or the measures to achieve our 2030 target under Paris, and further, to extend this ambition in line with international expectations."<sup>146</sup>

Canada's chief climate change negotiator described the international attention to Canada's approach:

There is a huge interest in what we're doing and also in the international community on carbon pricing and carbon markets writ large. From a negotiating perspective, parties recognize that there's a value to carbon markets and international emissions trading as a way of accelerating GHG emission reductions.<sup>147</sup>

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143 ENVI, *Evidence*, 25 October 2018, 1535, (Anne-Raphaëlle Audouin).

144 E.g. ENVI, *Evidence*, 16 October 2018, 1625 (Matt Jones).

145 ENVI, *Evidence*, 30 October 2018, 1700, (John Drexhage).

146 ENVI, *Evidence*, 23 October 2018, 1545 (Isabelle Turcotte).

147 ENVI, *Evidence*, 16 October 2018, 1600, (Catherine Stewart, Director General, Climate Change International and Chief Negotiator for Climate Change).

## a. Canada's international climate finance commitments

At COP 15 in Copenhagen in 2009, Canada committed to work with developed country partners to “jointly mobilize, from a wide variety of sources, US \$100 billion annually by 2020.”<sup>148</sup>

Building on this earlier commitment, the *Paris Agreement* states in Article 9 that developed country parties will continue to take the lead in providing financial resources to assist developing country parties with both adaptation and mitigation, “noting the significant role of public funds,” and considering the need for public and grant-based resources for adaptation.<sup>149</sup> Parties have agreed that financing should be scaled up and should aim to achieve a balance between financing mitigation and financing adaptation.<sup>150</sup>

In the PCF, the federal government reiterates its commitment of \$2.65 billion by 2020 “to help the poorest and most vulnerable countries mitigate and adapt to the adverse effects of climate change.”<sup>151</sup> According to Anar Mamdani of the Department of Foreign Affairs, Trade and Development, more than \$1.2 billion in funding has been announced as part Canada's \$2.65 billion climate-finance commitment.<sup>152</sup>

In testimony related to climate finance, witnesses emphasized several themes, which are outlined below.

### Balancing funding for adaptation with funding for mitigation

Witnesses noted that funding for adaptation should be at least half of Canada's climate finance. Naomi Johnson, from the Canadian Foodgrains Bank, highlighted that the *Paris Agreement* states the need for a balance between adaptation and mitigation. She also noted that Canada has improved in this regard, having recently increased the share of

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148 Justin Trudeau, Prime Minister of Canada, “[Prime Minister announces investment in Global Climate Change Action](#),” News release, 27 November 2015.

149 United Nations Framework Convention on Climate Change, [Paris Agreement](#), Article 9, 12 December 2015.

150 Government of Canada, [The Paris Agreement](#).

151 Governments of Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Alberta, British Columbia, Yukon, Northwest Territories, Nunavut, and Canada, [Pan-Canadian Framework on Clean Growth and Climate Change](#), 2016.

152 ENVI, [Evidence](#), 16 October 2018, 1540 (Anar Mamdani, Director, Environment, Department of Foreign Affairs and International Trade).



climate finance dedicated to adaptation from 16% to 30%.<sup>153</sup> However, this still does not meet the equal split between adaptation funding and mitigation funding that was called for by witness testimony and briefs submitted to the committee.<sup>154</sup>

An issue raised by a few witnesses was the lack of adaptation projects that meet the current criteria for funding. As Dominique Charron from the International Development Research Centre phrased it, “there is an inadequate pipeline of fundable, bankable adaptation projects for investors.”<sup>155</sup> According to Ms. Charron, adaptation projects struggle to attract investment from climate finance initiatives because they are riskier, and because they have longer-term objectives, which bring mostly social improvements that are not easily quantifiable from a financial return perspective.<sup>156</sup> To bridge this gap, Laurence Blandford, from the Center for Clean Air Policy, suggested that “[w]orking on origination and supporting the development of projects as much as their implementation is going to be really important as we look forward.”<sup>157</sup>

According to the witnesses, adaptation projects are an integral part of climate finance because they support the poorest and most vulnerable, who are already facing some of the consequences of climate change.<sup>158</sup>

### Targeting the poorest and most vulnerable with the adaptation funds

In their brief to the Committee, CARE Canada highlighted that developing nations “are already bearing 80% of the cost of climate change, including through food insecurity, loss and damage, compromised livelihoods and instability.”<sup>159</sup> Taking this into account,

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153 ENVI, *Evidence*, 18 October 2018, 1540 (Naomi Johnson, Policy Advisor, Canadian Foodgrains Bank).

154 ENVI, *Evidence*, 18 October 2018, 1540 (Naomi Johnson); ENVI, *Evidence*, 1 November 2018, 1635 (Catherine Abreu); Shaughn McArthur (Policy and Influence Lead, CARE Canada), “[#CanAdapt: Towards a made-in-Canada gender-responsive international climate change policy](#),” Written response to the House of Commons Standing Committee on Environment and Sustainable Development [CARE Canada Written Response], November 2018; Canadian Coalition on Climate Change and Development, [Written response to the House of Commons Standing Committee on Environment and Sustainable Development](#) [C4D Written Response], 2 November 2018.

155 ENVI, *Evidence*, 1 November 2018, 1655 (Dominique Charron, Director, Agriculture and Environment, Programs and Partnerships, International Development Research Centre).

156 Ibid.

157 ENVI, *Evidence*, 25 October 2018, 1540 (Laurence Blandford).

158 ENVI, *Evidence*, 18 October 2018, 1540 (Naomi Johnson); ENVI, *Evidence*, 23 October 2018, 1535 (Keith Stewart); ENVI, *Evidence*, 1 November 2018, 1635 (Catherine Abreu).

159 Canadian Coalition on Climate Change and Development, [C4D Written Response](#), 2018.

various witnesses stated that special attention should be paid to ensure Canada's climate finance is effective at reaching the poorest and most vulnerable.<sup>160</sup>

Certain witnesses focused specifically on promoting gender equality through climate finance. Representatives from both the Department of Foreign Affairs, Trade and Development and the International Development Research Centre highlighted that women and girls are more vulnerable to the consequences of climate change. In this light, they both presented how Canada's climate finance is reaching these women, for example by funding climate-smart agricultural projects and a local initiative for a warning system for floods.<sup>161</sup> CARE Canada and the Canadian Coalition on Climate Change and Development called for further action in this area, suggesting a clear strategy for the integration of gender equality in climate finance commitments and support for women's environmental and agricultural organizations.<sup>162</sup>

More generally, Laurence Blandford, from the Center for Clean Air Policy, stated that the goal of climate finance should be "to focus on long-term transformation in developing countries, not just financing projects."<sup>163</sup>

### **Mechanisms for delivering climate finance**

Much of Canada's international funding for climate change is channelled through multilateral organizations and private sector initiatives. For example, Canada has pledged \$300 million to the Green Climate Fund, the financing mechanism established under the United Nations Framework Convention on Climate Change to address both adaptation and mitigation needs.<sup>164</sup> Anar Mamdani explained the need for involvement from the private sector, noting that

[t]he estimates for the financing required to tackle climate change run into the trillions, and this cannot be met by the public sector alone. Public sector climate finance can help leverage the private sector to advance innovative and viable climate solutions. That is why Canada will be providing \$1.8 billion of our climate finance through repayable

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160 ENVI, [Evidence](#), 18 October 2018, 1540 (Naomi Johnson); ENVI, [Evidence](#), 1 November 2018, 1635 (Catherine Abreu).

161 ENVI, [Evidence](#), 16 October 2018, 1545, (Anar Mamdani); ENVI, [Evidence](#), 1 November 2018, 1640, (Dominique Charron).

162 Shaughn McArthur, [CARE Canada Written Response](#), 2018; Canadian Coalition on Climate Change and Development, [C4D Written Response](#), 2018.

163 ENVI, [Evidence](#), 25 October 2018, 1540 (Laurence Blandford).

164 ENVI, [Evidence](#), 16 October 2018, 1550 (Anar Mamdani).



contributions, including through dedicated private sector facilities at multilateral development banks.<sup>165</sup>

Some witnesses expressed concern with an overreliance on multilateral organizations and private sector funding. They noted that these institutions tend to favour mitigation projects over adaptation ones, that they are ineffective at reaching the most vulnerable, and that they are too risk averse and thus overlook early-stage and smaller initiatives.<sup>166</sup> Naomi Johnson, of the Canadian Foodgrains Bank, stressed the importance of using climate finance to work with Canadian and local civil society organizations, as they often have the expertise necessary to have a bigger impact in adaptation and in reaching the most vulnerable.<sup>167</sup>

### Recommendation 9

**The committee recommends that the Government of Canada embark on a process to identify Canadian non-governmental organizations and local civil society organizations capable of delivering effective projects to support adaptation and vulnerable populations in other countries, and help these organizations access Canadian and international climate finance funds.**

Regarding how funds are allocated, many witnesses who spoke on climate finance suggested increasing the share of funding that is allocated through grants instead of loans. They noted that this form of financing would reduce the debt burden of developing countries and help to reduce the barrier to entry for SMEs looking to address climate change in developing nations.<sup>168</sup>

### Canada's "fair share"

Current Canadian commitments amount to \$800 million annually by 2020, out of a total pledge of US \$100 billion annually by all donor countries.<sup>169</sup> Several witnesses noted that while this commitment to climate finance had been welcome, it was still not enough.

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165 Ibid.

166 ENVI, [Evidence](#), 18 October 2018, 1545 (Naomi Johnson); ENVI, [Evidence](#), 25 October 2018, 1540 (Laurence Blandford).

167 ENVI, [Evidence](#), 18 October 2018, 1545 (Naomi Johnson).

168 ENVI, [Evidence](#), 18 October 2018, 1545 (Naomi Johnson); ENVI, [Evidence](#), 18 October 2018, 1615 (Hari Balasubramanian); ENVI, [Evidence](#), 23 October 2018, 1535 (Keith Stewart); ENVI, [Evidence](#), 1 November 2018, 1710 (Catherine Abreu).

169 Shaughn McArthur, [CARE Canada Written Response](#), 2018; Canadian Coalition on Climate Change and Development, [C4D Written Response](#), 2018.

According to these witnesses, given that Canada’s economy makes up 3.9% of all donor economies within the OECD, the Canadian commitment should be about 4% of the total pledge. According to this calculation, Canada should be contributing up to US \$4 billion for climate finance annually.<sup>170</sup> Considering that the US \$100 billion commitment will also be met by investment from the private sector and multilateral funding, Canada’s “fair share” would be 3.9% of the US \$37.3 billion expected to come from bilateral donor sources, or approximately \$1.8 billion annually, which still represents more than double the current commitment.<sup>171</sup>

Moreover, Keith Stewart of Greenpeace Canada and the Canadian Coalition on Climate Change and Development explained that the funding for climate finance should increase the total contribution to international aid—as opposed to simply reallocating funding within Canada’s official development assistance. Otherwise, as climate finance takes up a larger portion of this envelope, other important international development goals might not receive sufficient aid.<sup>172</sup>

#### **Recommendation 10**

**The committee recommends that the Government of Canada increase the proportion of its climate finance funding that is dedicated to adaptation measures to 50%.**

#### **Recommendation 11**

**The committee recommends that the Government of Canada ensure that a greater amount of the climate finance is given as grants and not just as loans, given the difficulty of repayment for many of the poorest and most vulnerable states.**

#### **Recommendation 12**

**The committee recommends that the Government of Canada increase its climate finance further in future years with the goal of arriving at Canada’s “fair share” of global climate finance based on the size of its economy; approximately \$1.8 billion annually.**

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170 E.g. ENVI, [Evidence](#), 1 November 2018, 1635 (Catherine Abreu); ENVI, [Evidence](#), 23 October 2018, 1535 (Keith Stewart).

171 Aid Watch Canada, [The Reality of Canada’s International Climate Finance, 2010 to 2015: A Benchmarking Report](#), November 2017; Canadian Coalition on Climate Change and Development, [C4D Written Response](#), 2018.

172 ENVI, [Evidence](#), 23 October 2018, 1535 (Keith Stewart); Canadian Coalition on Climate Change and Development, [C4D Written Response](#), 2018.



## b. International trade and climate policy

In the PCF, the federal government committed to working to ensure that trade rules support climate policy.

### Trade agreements and climate change considerations

As Silvia Maciunas, of the Centre for International Governance Innovation pointed out, “I don’t think you can solve the climate problem solely within the UNFCCC or the Paris Agreement. You have to look at how other elements of the international legal framework fit into that.”<sup>173</sup> She noted several trade issues that could impede the development of clean technology and a transition to zero emissions. For example, World Trade Organization (WTO) rules related to subsidies can be problematic for supporting renewable energy or clean tech, because “the WTO is blind to the public policy rationale for the subsidy.”<sup>174</sup> She proposed ways of dealing with this, such as like-minded countries negotiating clean tech agreements that do allow subsidies, or Canada proposing an interpretation at the WTO within the subsidies agreement to allow subsidies with a “justifiable public purpose.”<sup>175</sup> Also on subsidies, Ms. Maciunas called for Canada to continue to seek ways to address fossil fuel subsidies, which she described as a “perverse incentive.”<sup>176</sup>

#### Recommendation 13

**The committee recommends that the Government of Canada, having committed to an international review of its fossil fuel subsidies, ensure that the results of this review are transparently shared, and that Canada continues to seek ways to reduce and eliminate fossil fuel subsidies.**

Keith Stewart, of Greenpeace Canada, suggested that any trade agreement should be assessed in terms of whether it supports, rather than undermines, a more stable climate. He suggested that “we need to actually have climate change put front and centre and actually have enforcement teeth that are as strong on the environment side as they are on the trade and corporate protection side.”<sup>177</sup> Catherine Abreu wanted to

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173 ENVI, [Evidence](#), 30 October 2018, 1535 (Silvia Maciunas).

174 Ibid., 1540.

175 Ibid.

176 Ibid.

177 ENVI, [Evidence](#), 23 October 2018, 1535, (Keith Stewart).

see trade agreements that reinforce the strong environmental and social safeguards that Canada has in place, to support Canadian companies as the country moves to a clean energy economy.<sup>178</sup>

Silvia Maciunas recommended that Canada could lead by taking steps to develop a tool called a “climate waiver” at the WTO. Such a tool would allow members to agree, with just a three-quarters vote (not consensus) to justify non-compliance with their obligations based on “exceptional circumstances,” which could include climate measures. This would involve working with a group of like-minded countries.<sup>179</sup>

Ms. Maciunas also noted that in the Canada-European Union Comprehensive Economic and Trade Agreement (CETA) Canada and the EU commit to “facilitate and promote trade investment in environmental goods and services,”<sup>180</sup> which may be beneficial to Canada’s clean tech sector.

She also suggested that Canada might benefit from pursuing certain types of provisions in future trade agreements. For example, an agreement exists between Japan and the EU that requires that both parties effectively implement the *Paris Agreement* and obliges them to “promote the contribution of trade to the transition to low greenhouse gas emissions and climate resilient development.”<sup>181</sup> Meanwhile, an agreement between New Zealand and Taiwan “commits to reducing tariffs on environmental goods to zero.”<sup>182</sup> These kinds of provisions can help minimize trade-related disputes that would interfere with climate actions.

#### **Recommendation 14**

**The committee recommends that the Government of Canada continue to include innovative provisions in Canada’s regional and bilateral trade agreements, particularly in areas that might assist with the transition to a low carbon economy and with trade in environmental goods and services.**

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178 ENVI, *Evidence*, 1 November 2018, 1635, (Catherine Abreu).

179 ENVI, *Evidence*, 30 October 2018, 1545 (Silvia Maciunas).

180 *Ibid.*, 1535.

181 *Ibid.*

182 *Ibid.*



## Preventing carbon leakage

Because they are not applied universally, the implementation of pollution pricing measures may leave some industries exposed to competitive pressures internationally and lead to energy-intensive industries fleeing to less stringent countries or importing more carbon-intensive products rather than producing them in Canada. This would make these emission reduction measures inefficient. To prevent this “carbon leakage,” various mechanisms can be developed, with attention to the rules of trade agreements.<sup>183</sup> Output-based pricing, described in the section on carbon pricing, is one such mechanism.

Matt Jones explained how to avoid carbon leakage: “[T]he best way to avoid carbon leakage is to design smart policies and to do the analysis necessary to ensure that we understand the competitiveness positions of Canadian companies.”<sup>184</sup> He explained that Canadian policies are designed to support emission reductions being achieved without impinging on the competitiveness of the companies.<sup>185</sup>

Laurence Blandford, of the Center for Clean Air Policy, pointed out that the carbon regime is not the only factor that affects Canada’s competitiveness, noting that companies’ investment decisions are based on more than just climate change policy: “There are other things that make Canada a great place to invest, which I think a lot of businesses are paying attention to.”<sup>186</sup>

## Global versus national emissions reduction

Michael Binnion pointed out that because some of Canada’s industries have low emissions compared with their counterparts elsewhere, one way to reduce emissions globally would be to reduce production elsewhere and replace it with Canadian production. He pointed out that Canadian aluminum production, thanks to the clean hydroelectricity available in Canada, generates “only two tonnes of emissions per every tonne of aluminum, compared to America at 11, Australia at 14 and China at 17.”<sup>187</sup> The problem he identified is that this strategy, while lowering global emissions overall, would increase Canada’s emissions. He criticized carbon pricing because it would impact

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183 United Nations Environment Program and World Trade Organization, “[Part IV: National Policies to Mitigate, and Adapt to, Climate Change, and their Trade Implications](#)” in *Trade and Climate Change*, n.d.

184 ENVI, [Evidence](#), 16 October 2018, 1450 (Matt Jones).

185 Ibid.

186 ENVI, [Evidence](#), 25 October 2018, 1555 (Laurence Blandford).

187 Ibid., 1550 (Michael Binnion).

relatively low-emitting Canadian producers, potentially favouring higher-emitting production elsewhere, rather than displacing the higher-emitting production.

He recommended instead deregulating and giving tax rate reductions to help Canadian industries like aluminum—industries with “global comparative advantages in carbon”<sup>188</sup>—to be more competitive in world markets. If they displaced foreign production, he argued, they could lower global emissions.

Hari Balasubramanian pointed out Canada’s advantage in natural resources:

There is no way that by 2030 we’re going to come up with largescale carbon capture and storage technology, from an industrial perspective, even though all the fossil fuel companies in the world that I know of are working hard on that. We’re going to get there by investing in reforestation, protecting forests, helping indigenous people in the Amazon, and protecting the largest carbon sinks we have on our planet.<sup>189</sup>

#### **Recommendation 15**

**The committee recommends that the Government of Canada take measures to protect and grow Canada’s natural carbon sinks, such as forests, wetlands, soils, and oceans.**

#### **c. Internationally transferred mitigation outcomes (ITMOs)**

The *Paris Agreement*, in Article 6, allows for mitigation outcomes (i.e., credit for GHG emissions reductions) to be transferred between countries, but at the time of this study the mechanisms had not yet been fully developed. Canada’s priorities as listed in the PCF include ensuring that any cross-border transfer of mitigation outcomes is based on rigorous accounting rules that are developed with input from experts, and that real GHG emissions reductions result from any such transfer (for example, double counting must be prevented).

Article 6 of the *Paris Agreement* may be seen as providing the foundation for international co-operation through carbon market development. Canada’s chief climate change negotiator, Catherine Stewart, noted that “parties recognize that there’s a value to carbon markets and international emissions trading as a way of accelerating GHG emissions reductions.”<sup>190</sup>

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188 Ibid.

189 ENVI, *Evidence*, 18 October 2018, 1640 (Hari Balasubramanian).

190 ENVI, *Evidence*, 16 October 2018, 1600 (Catherine Stewart).



## How internationally transferred mitigation outcomes could help meet greenhouse gas reduction targets

ITMOs are seen by some analysts as important components in facilitating transformational change. For example, according to the Center for Clean Air Policy, “[b]y reducing the cost of implementation, supporting early action, enabling transfer of low-carbon technologies, and building domestic capacity for mitigation, ITMOs can spur enhanced ambition.”<sup>191</sup>

Several witnesses highlighted the fact that some of the lowest-hanging fruit in terms of global GHG emissions reductions is not in Canada. John Drexhage noted, as an example, the gas flaring that happens in the petroleum industry in many countries: “The natural gas leakage that goes on throughout eastern Europe is massive. When you’re looking to try to reduce natural gas leakage in Alberta by thousandths or hundredths of 1% versus the 5% to 10% leakage that’s going on in some of the countries, it just makes so much more common sense.”<sup>192</sup> He noted that this could be an area where ITMOs could help achieve global reductions, and where it would make sense for a country like Canada to invest money in reducing GHGs overseas.

Some witnesses noted that Canada may wish to purchase GHG reductions from other countries to meet its targets. Many witnesses cautioned that ITMOs should be used on top of existing reductions—to increase ambition—rather than as a substitute for domestic reductions.<sup>193</sup>

## Ensuring internationally transferred mitigation outcomes work

International and national governance measures will need to be in place to ensure that the use of ITMOs really does result in reduced emissions. Potential pitfalls could include double counting in conjunction with climate finance, or transfer of easily attainable mitigation outcomes from developing to developed countries due to industry pressure, making it harder for the developing countries to achieve their targets.<sup>194</sup>

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191 P. Cozzi, S. Davis and L. Blandford, Centre for Clean Air Policy. [Transfers in the Paris Agreement: Can they enable greater ambition?](#), 5 October 2016.

192 ENVI, [Evidence](#), 30 October 2018, 1405 (John Drexhage).

193 E.g. ENVI, [Evidence](#), 23 October 2018, 1535 (Keith Stewart); ENVI, [Evidence](#), 23 October 2018, 1550 (Isabelle Turcotte).

194 P. Cozzi, S. Davis and L. Blandford, Centre for Clean Air Policy. [Transfers in the Paris Agreement: Can they enable greater ambition?](#), 5 October 2016.

John Drexhage acknowledged the concern of some industry and provincial representatives who worry that funds spent overseas on ITMOs are funds that could have been spent in Canada to support GHG emissions reductions.<sup>195</sup>

Several witnesses noted that there may be questions about whether purchasing international emissions reductions would effectively be failing to address emissions from large polluters in Canada, and instead burdening other jurisdictions with the emissions reductions.<sup>196</sup>

While witnesses generally agreed that ITMOs had potential to be useful for international emissions reductions overall, there was a clear concern among some witnesses that ITMOs might be used to decrease ambition for GHG reductions.<sup>197</sup> Several witnesses suggested that ITMOs should be used as a last step—to add ambition when all possible domestic actions have already been taken. Keith Stewart of Greenpeace suggested Canada should achieve all the reductions committed to under our NDC in Canada, adding, “[i]nternationally traded credits should be really viewed as icing on the cake, going further to help things go faster.”<sup>198</sup>

John Drexhage, in contrast, suggested that it was preferable to see ITMOs as “strategic investment that is developed in support of, and complementary to, domestic actions, which will also help the federal government to close its emissions gap.”<sup>199</sup>

According to Mr. Drexhage, “[w]hen it come[s] to domestic actions and international credits, it is not one or the other. It is one and the other.”<sup>200</sup> He noted that the flexibility offered by ITMOs will always be important for Canada as it tries to reach whatever GHG reduction targets it has taken on.<sup>201</sup>

## **Recommendation 16**

**The committee recommends that the Government of Canada consider using internationally transferred mitigation outcomes to meet its emissions reduction targets**

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195 ENVI, *Evidence*, 30 October 2018, 1555 (John Drexhage).

196 E.g. ENVI, *Evidence*, 30 October 2018, 1555 (John Drexhage).

197 E.g. ENVI, *Evidence*, 23 October 2018, 1750 (Isabelle Turcotte); ENVI, *Evidence*, 1 November 2018, 1635 (Catherine Abreu).

198 ENVI, *Evidence*, 23 October 2018, 1735 (Keith Stewart).

199 ENVI, *Evidence*, 30 October 2018, 1600 (John Drexhage).

200 Ibid.

201 Ibid., 1555.



**and that it develop an approach to internationally transferred mitigation outcomes that clearly supports greater global ambition in terms of emissions reduction.**

Isabelle Turcotte of the Pembina Institute recognized the important role that ITMOs can play in stimulating a new round of innovation and cooperative approaches, but wanted to see the following principles adhered to by both the selling and purchasing nations: “ITMOs should safeguard the environmental integrity of reductions; double counting should not occur; ITMOs should be voluntary and authorized by parties; ITMOs should support NDC implementation in both countries; and, most importantly, ITMOs should support ambition, and so they should support going beyond each country’s target.”<sup>202</sup>

Ms. Turcotte suggested that the federal government should develop its own national ITMO regime, with a mechanism to ensure that these principles are respected. She added that such a regime should establish clear rules on domestic ITMO use, including what types of credits are acceptable, standards on measurement, reporting, and verification, and limitations on use.

#### **Recommendation 17**

**The committee recommends that the Government of Canada develop a national regime on the use of internationally transferred mitigation outcomes for Canada by establishing clear rules on their use, including what types of credits are acceptable, standards on measurement, reporting, and verification, and limitations on use, and that this regime have a mechanism to ensure that key principles, such as supporting emissions reduction ambition, are respected.**

The Canadian Council on Renewable Energy sees opportunity in ITMOs to demonstrate leadership internationally by sharing Canadian expertise while supporting Canadian engagement in the global economy. They caution, however, that “[c]areful consideration will need to be given to how international credits interplay with our national emissions targets and markets. Limits and a floor carbon price could ensure that price signals from carbon pricing are not unduly compromised.”<sup>203</sup>

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202 ENVI, [Evidence](#), 23 October 2018, 1750 (Isabelle Turcotte).

203 ENVI, [Evidence](#), 25 October 2018, 1535 (Patrick Bateman).

## 5. INTERNATIONAL LEADERSHIP ON CLIMATE CHANGE

### a. Global good practices in reducing GHGs

Witnesses were asked about countries that are successfully reducing GHG emissions and successfully meeting their international commitments. John Drexhage noted that Norway meets its GHG reduction targets partly due to its willingness to invest in “strong, credible greenhouse gas reduction and sequestration projects beyond its national borders, helping them to reach their targets and to share expertise and know-how abroad, thereby helping their burgeoning clean energy industry and building capacity in other countries to do so.”<sup>204</sup>

Japan was referenced for a model they developed under the joint crediting mechanism: “Working closely with industry, they have successfully invested in greenhouse gas reduction opportunities that also work to promote real economic opportunities.”<sup>205</sup> Japan was also cited for its work to maximize energy efficiency and its reduction of energy consumed “per unit of production, per household, per square foot of office space,” etc.<sup>206</sup>

Australia’s Emissions Trading Scheme was acknowledged for, “generating over \$2.5 billion in emission reduction strategies being championed and spearheaded by the private sector,”<sup>207</sup> which was seen as an example of non-traditional actors (such as a very large mining company) sending the message that carbon pricing is a solution and a financial opportunity.

Catherine Abreu pointed to Sweden, Great Britain, Finland, and Denmark, for having a legislative processes that require greater accountability and transparency with respect to greenhouse gas emissions.<sup>208</sup> She described a process that could work in Canada, like the U.K.’s Committee on Climate Change, where there are regular and consistent reports on the accomplishment of climate objectives, and where recommendations and reports are delivered to provincial and federal governments and that the federal government then has to respond.

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204 ENVI, *Evidence*, 30 October 2018, 1555 (John Drexhage).

205 Ibid.

206 ENVI, *Evidence*, 8 November 2018, 1625 (Matt Jones).

207 ENVI, *Evidence*, 18 October 2018, 1530 (Hari Balasubramanian).

208 ENVI, *Evidence*, 1 November 2018, 1705 (Catherine Abreu).



### **Recommendation 18**

**The committee recommends that the Government of Canada develop a strong mechanism for accountability for accomplishing the objectives of the Pan-Canadian Framework on Clean Growth and Climate Change. This mechanism should involve development of key indicators that help Canada measure progress over time and report consistently on that progress, with the goal of taking concrete action to meet Canada’s *Paris Agreement* commitments.**

Several witnesses pointed out the leadership in the corporate world related to climate change. In particular, witnesses pointed to the importance of the Task Force on Climate-related Financial Disclosures, set up by Mark Carney and Mike Bloomberg, which they suggested could offer a really complementary process, where businesses engaged in international trade develop a shared understanding and transparent accounting of the climate-related risks of their operations.<sup>209</sup> When these big players are engaging on these issues, as one witness noted, behaviour change is underway.<sup>210</sup>

### **b. Canada’s international engagement and collaboration on climate change**

In addition to the actions laid out in the Pan-Canadian Framework, the committee was interested in Canada’s leadership internationally and the way that Canada is perceived internationally. They heard that Canada’s record is mixed on climate action broadly, but that Canada is considered a leader on carbon pricing.

According to Chris Ragan of Canada’s Ecofiscal Commission, “Canada is not a leader in climate policy, but we are actually moving forward, and that’s a good thing.”<sup>211</sup> While acknowledging that Canada is not yet considered a leader in climate policy broadly, witnesses noted that Canada is recognized as a leader in climate science<sup>212</sup> and in carbon pricing.

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209 Ibid., 1635.

210 ENVI, *Evidence*, 18 October 2018, 1530 (Hari Balasubramanian).

211 ENVI, *Evidence*, 1 November 2018, 1625 (Christopher Ragan).

212 ENVI, *Evidence*, 8 November 2018, 1605 (Nancy Hamzawi).

Greg Flato commented that there is a lot of research undertaken in Canada that is published in very high-profile journals and cited in IPCC assessments, and that Canada has a very good reputation internationally as a leader in climate science.<sup>213</sup>

Witnesses also highlighted many fora in which Canada is taking a leadership role internationally and working with other jurisdictions bilaterally and multilaterally to address climate change issues. For example, Canada is a key player in the UNFCCC.<sup>214</sup> Catherine Abreu, of the Climate Action Network Canada, said, “[m]y first UN climate conference was in Paris in 2015 and I can’t tell you how moving it was to be a Canadian in a space where the world was so excited to have Canada back. We just can’t afford to lose our reputation again for punching above our weight when it comes to climate policy and international climate diplomacy.”<sup>215</sup>

Isabelle Bérard, of ECCC, noted the significance of the *Paris Agreement*, as well as Canada’s other work on climate change: “We believe fundamentally that the Paris Agreement will help drive global ambition on climate change. But there are other ways that Canada is providing global leadership on this front,”<sup>216</sup> she pointed out.

Canada has also taken a leadership role on tackling climate change internationally in several other ways. Isabelle Bérard of ECCC referenced Canada’s leadership role in, among others, the following areas related to climate change:

- Canada and the United Kingdom launched the Powering Past Coal Alliance, which is a voluntary coalition of governments, businesses and organizations that are helping to end the use of unabated coal power around the world. The Alliance continues to grow, with 74 members now who recognize the value of this initiative;
- Canada, along with China and the European Union, launched a ministerial meeting on climate action, and has co-hosted two meetings among ministers to identify common ground towards adopting the Paris “rule book;”

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213 Ibid., 1625 (Greg Flato, Senior Scientist, Canadian Centre for Climate Modelling and Analysis, Science and Technology Branch).

214 ENVI, [Evidence](#), 16 October 2018, 1540 (Isabelle Bérard).

215 ENVI, [Evidence](#), 1 November 2018, 1635 (Catherine Abreu).

216 ENVI, [Evidence](#), 16 October 2018, 1540 (Isabelle Bérard).



- ECCC works in close collaboration with several countries to advance Canada's international climate change and environmental protection agenda;
- Canada undertakes co-operative work with the United States and Mexico under the Commission for Environmental Cooperation;
- Canada joined like-minded U.S. states and Mexico to create the North American Climate Leadership Dialogue, committing to work co-operatively on clean transportation, vehicle efficiency and clean power, and on reducing short-lived climate pollutants;
- Prime Minister Trudeau and his Chinese counterpart issued a joint leaders' statement on climate change and clean growth, establishing new ministerial dialogues on climate change, environment and energy;
- Minister McKenna is the international executive vice-chair of the China Council for International Cooperation on Environment and Development, CCICED;
- Canada and the EU have strong bilateral relations on the environment and climate change;
- There is a France-Canada climate and environment partnership;
- Canada is working with the U.K. on issues such as climate change adaptation, carbon pricing and phasing out traditional coal under the Canada-U.K. partnership, which was announced by Prime Minister Trudeau and Prime Minister May in September 2017.<sup>217</sup>

Lucie Desforges, Director General, Bilateral Affairs and Trade Directorate, ECCC, noted that Canada has also struck co-operation agreements with France and the U.K to learn from them on topics like adaptation and green finance.<sup>218</sup>

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217 ENVI, *Evidence*, 16 October 2018, 1540; 1545 (Isabelle Bérard).

218 ENVI, *Evidence*, 16 October 2018, 1540 (Lucie Desforges, Director General, Bilateral Affairs and Trade Directorate, Department of the Environment).

## 6. CONCLUSION

For the first time, Canada has a plan to act on climate change, and is implementing this plan. While the plan will likely require course corrections along the way, there was agreement among almost all witnesses that in implementing the measures in the Pan-Canadian Framework, including putting a price on carbon pollution, Canada is on the right path. The October 2018 special report from the IPCC highlights the need for greater global ambition in GHG reductions. In Canada's current emissions trajectory there is a significant gap between planned and projected reductions, and Canada will need to take additional measures to meet its targets and to be seen as an international leader.

Canada has many advantages in a global shift to a low or zero carbon economy: a power grid that is primarily based on renewable energy; a burgeoning clean-tech industry; extensive land area with potential for natural carbon storage. This is a time when Canada can be innovative, build on strengths, and not only bring Canadians together to mitigate climate change, but also play a leading role globally in addressing this challenging issue.



## APPENDIX A LIST OF WITNESSES

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The following table lists the witnesses who appeared before the Committee at its meetings related to this report. Transcripts of all public meetings related to this report are available on the Committee’s [webpage for this study](#).

Organizations and Individuals	Date	Meeting
<p><b>Citizens' Climate Lobby</b></p> <p>Judy O'Leary, Group Leader and British Columbia Coordinator Nelson-West Kootenay Chapter</p> <p>Laura Sacks, Group Leader and British Columbia Coordinator Nelson-West Kootenay Chapter</p>	2018/10/16	124
<p><b>Department of Foreign Affairs, Trade and Development</b></p> <p>Anar Mamdani, Director Environment</p>	2018/10/16	124
<p><b>Department of the Environment</b></p> <p>Isabelle Bérard, Assistant Deputy Minister International Affairs Branch</p> <p>Lucie Desforges, Director General Bilateral Affairs and Trade Directorate</p> <p>Erin Silsbe, Acting Director G7 Task Team</p> <p>Catherine Stewart, Director General Climate Change International and Chief Negotiator for Climate Change</p>	2018/10/16	124
<p><b>Canadian Foodgrains Bank</b></p> <p>Andrew Defor, Policy Advisor</p> <p>Naomi Johnson, Policy Advisor</p>	2018/10/18	125
<p><b>EcoAdvisors</b></p> <p>Hari Balasubramanian, Managing Partner</p>	2018/10/18	125

<b>Organizations and Individuals</b>	<b>Date</b>	<b>Meeting</b>
<b>Grain Growers of Canada</b> Tyler McCann, Interim Executive Director	2018/10/23	126
<b>Greenpeace Canada</b> Keith Stewart, Senior Energy Strategist	2018/10/23	126
<b>Pembina Institute</b> Isabelle Turcotte, Director Federal Policy	2018/10/23	126
<b>As an individual</b> Michael Binnion	2018/10/25	127
<b>Canadian Council on Renewable Electricity</b> Anne-Raphaëlle Audouin, Representative Patrick Bateman, Representative	2018/10/25	127
<b>Center for Clean Air Policy</b> Laurence Blandford, Director International Policy Analysis	2018/10/25	127
<b>As individuals</b> John Drexhage, Consultant Drexhage Consulting Chris Turner	2018/10/30	128
<b>Centre for International Governance Innovation</b> Silvia Maciunas, Deputy Director International Environmental Law	2018/10/30	128
<b>Canada's Ecofiscal Commission</b> Christopher Ragan, Chair	2018/11/01	129
<b>Climate Action Network Canada</b> Catherine Abreu, Executive Director	2018/11/01	129
<b>Council of Canadian Innovators</b> Michael Andrade, Chief Executive Officer Morgan Solar Incorporated	2018/11/01	129
<b>International Development Research Centre</b> Dominique Charron, Director Agriculture and Environment, Programs and Partnerships	2018/11/01	129

<b>Organizations and Individuals</b>	<b>Date</b>	<b>Meeting</b>
<b>Department of the Environment</b> Greg Flato, Senior Scientist Canadian Centre for Climate Modelling and Analysis, Science and Technology Branch Nancy Hamzawi, Assistant Deputy Minister Science and Technology Branch Matt Jones, Assistant Deputy Minister Pan-Canadian Framework Implementation Office Judy Meltzer, Director General Carbon Pricing Bureau	2018/11/08	131
<b>As individuals</b> Andrew Leach, Associate Professor Alberta School of Business, University of Alberta Nicholas Rivers, Associate Professor University of Ottawa	2019/01/28	139
<b>Canada's Ecofiscal Commission</b> Dale Beugin, Executive Director	2019/01/28	139
<b>Clean Prosperity</b> Mark Cameron, Executive Director	2019/01/28	139
<b>Smart Prosperity Institute</b> David Sawyer, Senior Fellow	2019/01/28	139
<b>Canadian Fuels Association</b> Peter Boag, President and Chief Executive Officer Carol Montreuil, Vice-President Eastern Canada	2019/01/30	140
<b>Clean Energy Canada</b> Joanna Kyriazis, Senior Policy Advisor	2019/01/30	140
<b>National Airlines Council of Canada</b> Massimo Bergamini, President and Chief Executive Officer Geoffrey Tauvette, Director, Fuel and Environment, WestJet Environment Committee	2019/01/30	140
<b>Washington Policy Center</b> Todd Myers, Environmental Director	2019/01/30	140



## **APPENDIX B LIST OF BRIEFS**

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The following is an alphabetical list of organizations and individuals who submitted briefs to the Committee related to this report. For more information, please consult the Committee's [webpage for this study](#).

**Canadian Coalition on Climate Change and Development**

**CARE Canada**

**City of Montreal**

**Fertilizer Canada**

**Teck Resources Limited**



# REQUEST FOR GOVERNMENT RESPONSE

Pursuant to Standing Order 109, the Committee requests that the government table a comprehensive response to this Report.

A copy of the relevant *Minutes of Proceedings* ([Meetings Nos. 124 to 129, 131, 132, 139, 140, 143, 144, 146 and 147](#)) is tabled.

Respectfully submitted,

John Aldag  
Chair



## **DISSENTING REPORT FROM THE OFFICIAL OPPOSITION CONSERVATIVE MEMBERS REGARDING THE REPORT ON INTERNATIONAL LEADERSHIP**

### **SUMMARY**

The Conservative members of the Standing Committee on Environment and Sustainable Development support a number of the Recommendations presented in the Report, including Recommendation 9 (identifying Canadian non-governmental organizations to access Canadian and international climate finance funds) and Recommendations 16 and 17 (Internationally Transferred Mitigation Outcomes). These are strong Recommendations which pursue greenhouse gas (GHG) emissions reductions in a sustainable and affordable manner within a Canadian context. However, these principles are not reflected in the remainder of the Recommendations, which instead prioritize costly virtue-signaling policies rather than practical, Canadian-centric solutions to a changing climate.

The Conservative members of the Committee raise a special concern with the Report's bias in favour of carbon taxation as the most prominent tool in reducing GHG emissions. Additionally, the costs associated with many of the Recommendations place unnecessary burdens on Canadian industries, including Canadian small- and medium-sized enterprises, which lead to additional costs for average Canadians. Lastly, the Committee failed to consult with a representative group of international leaders despite its focus being on International Leadership. For these reasons the Conservative members of the Committee are unable to support the Report.

### **CARBON TAX**

The Liberal government frequently lauds its carbon pricing scheme on the international stage. This is evidenced in the Report, which refers to Canada as a "leader in climate science and in carbon pricing."<sup>1</sup> This undue reliance on the supposed merits of a carbon tax is reflected in the Committee's decision to champion the carbon tax as the cornerstone of this Report. Despite testimony from a number of industry witnesses that a carbon tax represented a competitiveness challenge to their viability, the Report still portrays the tax as an essential contribution to GHG emission reductions. The President and Chief Executive Officer of the National Airlines Council of Canada (NACC), while commenting on the effects of the current carbon pricing plan on his industry, clearly testified that "as a market-based measure, the carbon tax is not well suited to commercial aviation in general and is particularly ill-suited in the Canadian context."<sup>2</sup> However, this is not how NACC's position is characterized in the Report, which states that "the National Airlines Council of Canada fully supports putting a price on carbon."<sup>3</sup> While the NACC did in its statement to the Committee acknowledge the merits of certain carbon pricing models, the

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<sup>1</sup> Report on International Leadership, version 2, p. 77.

<sup>2</sup> Standing Committee on Environment and Sustainable Development, No. 140, 1<sup>st</sup> Session, 42<sup>nd</sup> Parliament, (30 January 2019): para. 1570.

<sup>3</sup> Report on International Leadership, version 2, p. 46.

Report does not accurately reflect the sum of NACC's testimony, which is that it believes the current Canadian carbon tax "would exacerbate commercial and emission leakage, curb growth in the visitor economy, and as it is currently slated to be rolled out, would cause significant market distortions."<sup>4</sup> This is just one example of the mischaracterizations that this Report promotes in presenting the positions of Canadian industry.

The Committee also failed to acknowledge the failure of the British Columbia carbon tax regime to deliver on any of its implied promises. The tax, which has been held up by some as the ideal model of what carbon taxation should look like, was intended to 1) reduce absolute GHG emissions within the province; 2) be capped at \$30 per tonne of GHG emissions; and 3) be revenue neutral. None of those objectives have been achieved. Absolute GHG emissions continue to increase in the province, and the original cap of \$30 has been exceeded and continues to rise as the tax hits \$40 per tonne this year (2019). More concerning is the fact that the tax, which had been promised to be revenue neutral, has now become a cash cow for the current NDP government, which eliminated the revenue neutrality of the carbon tax as one of its first acts after taking power. It is inevitable that carbon tax regimes which purport to be revenue neutral (as is the promise of the federal carbon tax regime) will eventually become sources of government revenues that are spent on the political priorities of the government in power.

Ultimately, the Conservative members cannot agree with the biased conclusions of the Report nor with its uncritical promotion of a carbon tax, and therefore cannot support this Report.

## **AFFORDABILITY**

The Report lacks consideration of the issue of general affordability and of the increasing costs which the Liberal climate change plan will impose on Canadian industries engaged in the international marketplace.

### Industries

Recommendations 4 and 5 state that the Government of Canada should permit airlines to purchase offsets and incentivize the development of low GHG emission airline fuels. Both of these recommendations do not accurately reflect the testimony given by the NACC representatives who appeared before the Committee. For instance, Recommendation 4 recommends that the Government of Canada allow airlines to purchase offsets; however, this would be *in addition to* the carbon tax that airlines are currently subjected to.<sup>5</sup> The NACC had proposed that, instead of paying a carbon tax, Canadian airlines be permitted to opt into the output-based pricing system, which would allow them to contribute to "real carbon reductions through offsets."<sup>6</sup> That proposal is not reflected in Recommendation 4.

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<sup>4</sup> Standing Committee on Environment and Sustainable Development, No. 140, 1<sup>st</sup> Session, 42<sup>nd</sup> Parliament, (30 January 2019): para. 1570.

<sup>5</sup> Report on International Leadership, version 2, p. 1.

<sup>6</sup> Standing Committee on Environment and Sustainable Development, No. 140, 1<sup>st</sup> Session, 42<sup>nd</sup> Parliament, (30 January 2019): para. 1664

Similarly, the same mischaracterization is reflected in Recommendation 5, which advocates for the incentivization of low GHG emissions airline fuels<sup>7</sup> such as biofuels. However, when NACC testified regarding the use of low-carbon fuel, it supported the incentivization of low-carbon fuel as a by-product of an “alternative plan,”<sup>8</sup> *not in addition to* the current carbon pricing scheme.

The Report’s mischaracterization of comments made by the NACC will only result in higher costs for this industry without incentivizing the development of real improvements in emissions reductions. The Chief Executive Officer of NACC highlighted how these additional costs affect not only Canadian industry but also the average Canadian. He explained that the carbon tax would undoubtedly result in Canadians paying more and more for flights as the carbon tax increases in 2022, 2026, and 2030.<sup>9</sup>

The Report failed to highlight the work that industries such as the NACC are already doing to lower their emissions, which is keeping the industry competitive and delivering affordable transportation options for Canadian families without the additional burden of a carbon tax.

### Taxpayers

The Conservative members of Committee are committed to helping fund climate adaption and mitigation programs in developing and least developed countries, particularly when conducted by Canadian non-governmental organizations. However, the implied costs associated with the recommendations found within the Report will only exacerbate the financial challenges facing the Government and further impair any efforts for the current Government to balance the federal budget.

Recommendations such as 11 and 12 impose even more costs on Canadian taxpayers. Repayable loans are currently an important element of Canada’s international climate change efforts. They create a sustainable way for Canada to aid developing and least developed nations to mitigate and adapt to climate change. However, re-balancing the allocated funding in favour of grants and away from loans imposes new demands on Canada’s fiscal framework at a time when the current Government has no plans to balance the federal budget. We cannot support more government spending without the Government presenting to Canadians a defensible and reasonable plan to return to budgetary balance.

The Report further acknowledges that Canada’s current contribution to the climate finance fund (Green Climate Fund) is about \$800 million annually.<sup>10</sup> The Report notes the suggestion of one witness to increase Canada’s contribution up to \$4 billion. While Recommendation 12 does not follow up on that increase, it does propose a significant increase to \$1.8 billion. Additionally, the Report seems to allude to a regular increase in that support and also mentions increased funding for international aid directed at climate conscious organizations.<sup>11</sup>

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<sup>7</sup> Report on International Leadership, version 2, p. 1.

<sup>8</sup> Standing Committee on Environment and Sustainable Development, No. 140, 1<sup>st</sup> Session, 42<sup>nd</sup> Parliament, (30 January 2019): para. 1599

<sup>9</sup> Standing Committee on Environment and Sustainable Development, No. 140, 1<sup>st</sup> Session, 42<sup>nd</sup> Parliament, (30 January 2019): para. 1572.

<sup>10</sup> Report on International Leadership, version 2, p. 61.

<sup>11</sup> Ibid, p. 62.

We believe the Government must exercise greater caution before embarking upon expensive new foreign climate change programs which worsen Canada's fiscal situation, have little to no accountability to Canadian taxpayers, and in many cases take up resources that could be better deployed by Canadian non-governmental organizations.

### **LACK OF CONSULTATION WITH INTERNATIONAL LEADERS**

This Report was focused on Clean Growth and Climate Change in Canada: Study on International Leadership. Despite this focus, the Committee did not hear from any international climate change leaders. Over the course of the Study, the Committee heard from 39 witnesses and received five written briefs on topics such as emissions reductions, mitigation and adaptation strategies, and climate financing. However, Committee members received limited advice from countries which are recognized as climate leaders.<sup>12</sup>

The Report discusses a number of recommendations for Canada to increase its efforts and commitments on the international stage, but again, direct input from foreign climate change leaders was missing entirely. The Conservative members believe that a robust report would have included advice and contributions from recognized global leaders.

Due to this gap in witness testimony, it is not possible for the Conservative members of the Committee to support the findings of this Report.

### **RECOMMENDATIONS**

In light of the concerns outlined above, the Conservative members of the Committee recommend that the Government:

- Place a greater emphasis on listening to advice and recommendations given by Canadian industries, especially in regards to affordability, sustainability, and an equitable transition to a low-carbon economy.
- Remove the federal carbon pricing backstop and leave it to the provinces and territories to implement climate change policies that reflect the unique nature of their economies and jurisdictions.
- Acknowledge that Canada's engagement in the global effort to help developing and least developed countries address their climate change challenges must be supported by sound fiscal and budgetary policy here at home.
- Consider the additional burden that environmental regulations and taxes have on taxpayers and on the competitiveness of Canadian industries.

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<sup>12</sup> Ibid, p. 5.