



HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

THE UNITED STATES' *INFLATION REDUCTION ACT OF 2022*: TRADE IMPACTS ON CERTAIN CANADIAN SECTORS

Report of the Standing Committee on International Trade

Honourable Judy A. Sgro, Chair

**MAY 2023
44th PARLIAMENT, 1st SESSION**

Published under the authority of the Speaker of the House of Commons

SPEAKER'S PERMISSION

The proceedings of the House of Commons and its Committees are hereby made available to provide greater public access. The parliamentary privilege of the House of Commons to control the publication and broadcast of the proceedings of the House of Commons and its Committees is nonetheless reserved. All copyrights therein are also reserved.

Reproduction of the proceedings of the House of Commons and its Committees, in whole or in part and in any medium, is hereby permitted provided that the reproduction is accurate and is not presented as official. This permission does not extend to reproduction, distribution or use for commercial purpose of financial gain. Reproduction or use outside this permission or without authorization may be treated as copyright infringement in accordance with the *Copyright Act*. Authorization may be obtained on written application to the Office of the Speaker of the House of Commons.

Reproduction in accordance with this permission does not constitute publication under the authority of the House of Commons. The absolute privilege that applies to the proceedings of the House of Commons does not extend to these permitted reproductions. Where a reproduction includes briefs to a Standing Committee of the House of Commons, authorization for reproduction may be required from the authors in accordance with the *Copyright Act*.

Nothing in this permission abrogates or derogates from the privileges, powers, immunities and rights of the House of Commons and its Committees. For greater certainty, this permission does not affect the prohibition against impeaching or questioning the proceedings of the House of Commons in courts or otherwise. The House of Commons retains the right and privilege to find users in contempt of Parliament if a reproduction or use is not in accordance with this permission.

Also available on the House of Commons website
at the following address: www.ourcommons.ca

**THE UNITED STATES' *INFLATION REDUCTION*
ACT OF 2022: TRADE IMPACTS ON CERTAIN
CANADIAN SECTORS**

**Report of the Standing Committee on
International Trade**

**Hon. Judy A. Sgro
Chair**

MAY 2023

44th PARLIAMENT, 1st SESSION

NOTICE TO READER

Reports from committees 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.

STANDING COMMITTEE ON INTERNATIONAL TRADE

CHAIR

Hon. Judy A. Sgro

VICE-CHAIRS

Kyle Seeback

Simon-Pierre Savard-Tremblay

MEMBERS

Chandra Arya

Tony Baldinelli

Richard Cannings

Colin Carrie

Anju Dhillon

Richard Martel

Wilson Miao

Terry Sheehan

Arif Virani

OTHER MEMBERS OF PARLIAMENT WHO PARTICIPATED

Charlie Angus

Taylor Bachrach

John Barlow

Daniel Blaikie

Terry Duguid

Hon. Ed Fast

Peter Fonseca

Randy Hoback

Irek Kusmierczyk

Leslyn Lewis

Alistair MacGregor

James Maloney
Brian Masse
Jeremy Patzer
Leah Taylor Roy
Gabriel Ste-Marie
Anita Vandenbeld
Ryan Williams

CLERKS OF THE COMMITTEE

Dancella Boyi
Sophia Nickel

LIBRARY OF PARLIAMENT

Parliamentary Information, Education and Research Services

Bashar Abu Taleb, Analyst
Andrés León, Analyst

THE STANDING COMMITTEE ON INTERNATIONAL TRADE

has the honour to present its

NINTH REPORT

Pursuant to its mandate under Standing Order 108(2), the committee has studied the potential trade impacts of the *United States Inflation Reduction Act of 2022* on certain firms and workers in Canada and has agreed to report the following:

TABLE OF CONTENTS

LIST OF RECOMMENDATIONS	1
THE UNITED STATES' <i>INFLATION REDUCTION ACT OF 2022</i> : TRADE IMPACTS ON CERTAIN CANADIAN SECTORS	5
Introduction.....	5
Trade and Investment Considerations.....	8
A. Consistency with International Trade Rules	9
B. Trade and Investment.....	9
Challenges and Opportunities for Certain Canadian Sectors.....	11
A. Automotive	12
B. Clean Energy and Clean Technology.....	14
C. Manufacturing	16
D. Metals and Minerals	18
Government of Canada Actions.....	19
A. General Comments.....	21
B. A National Industrial Strategy, and Other Strategies, Policies and Programs.....	23
C. Measures in Relation to Fossil-Based Energy	25
D. Measures in Relation to Non-Fossil-Based Energy and Clean Technologies	27
E. Automotive-Related Measures.....	28
F. Employee-Related Measures	29
G. Advocacy, Consultation and Collaboration	30
The Committee's Thoughts and Recommendations	31
APPENDIX A—PROVISIONS IN THE UNITED STATES' <i>INFLATION REDUCTION ACT OF 2022</i> CONCERNING CLEAN ENERGY AND CLEAN TECHNOLOGIES	37

APPENDIX B—CLIMATE AND ENERGY MEASURES ANNOUNCED IN THE GOVERNMENT OF CANADA’S 2022 FALL ECONOMIC STATEMENT	51
APPENDIX C LIST OF WITNESSES	53
APPENDIX D LIST OF BRIEFS.....	57
REQUEST FOR GOVERNMENT RESPONSE	59

LIST OF RECOMMENDATIONS

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

That the Government of Canada develop and implement a national industrial strategy that has specific, measurable and timely actions. Recognizing the need to consider the requirements and preferences of multiple domestic sectors, parts of this strategy should focus on the following three priorities: Canada’s ongoing transition to clean technologies and energy sources, as well as achievement of net-zero greenhouse gas emissions by 2050; the domestic manufacturing of certain essential goods; and the ongoing competitiveness of Canada’s sectors and the country’s ability to attract new investments. In developing and implementing the strategy, the Government should consult with relevant stakeholders, including other governments in Canada, as well as representatives of business trade associations and organized labour groups..... 33

Recommendation 2

That the Government of Canada consider creating a special manufacturing blue ribbon panel that would include representatives from the private sector and organized labour groups. Among its goals, the panel should work to ensure that future federal support programs designed to meet the evolving needs of Canadian firms are made available expeditiously, and that—with a view to high levels of participation—such firms are made aware of new measures. As well, when creating future federal tax credits and subsidies for the private sector, attention should be paid to implementing measures that would support the ability of Canada’s firms to compete with their United States counterparts following the enactment of the United States’ *Inflation Reduction Act of 2022*. 33

Recommendation 3

That the Government of Canada ensure that federal support measures provided to people, firms and communities—whether in the form of program spending or tax expenditures—are developed with due consideration given to adequacy, accessibility and timely delivery. As well, measures announced in federal budgets and economic statements should be as detailed as possible concerning eligibility requirements and any required application process. 33

Recommendation 4

That the Government of Canada—alone and in collaboration with other relevant stakeholders, as appropriate—continue with and enhance its advocacy efforts in the United States regarding that country’s legislation, policies and measures that could have intended and unintended consequences for Canada. Advocacy concerning the United States’ *Inflation Reduction Act of 2022* should continue to be part of those efforts..... 34

Recommendation 5

That the Government of Canada consider designing and implementing federal policies to ensure that goods the Government procures have been produced using low-carbon emitting technologies..... 34

Recommendation 6

That the Government of Canada undertake advocacy efforts with the Government of the United States with the goal of ensuring that all batteries for zero-emission vehicles that are manufactured in North America are eligible for the Advanced Manufacturing Production Credit provided under Section 45X of the United States’ *Inflation Reduction Act of 2022*. 34

Recommendation 7

That the Government of Canada provide incentives for Canadian production of low-cost green hydrogen by expanding the scope of two measures proposed in the 2022 federal fall economic statement: the investment tax credit for clean hydrogen; and the Clean Growth Fund. In particular, their scope should be expanded to include operational costs for the first three years of an eligible firm’s operations. As well, the details of the proposed investment tax credit for clean hydrogen should be made clear, partly with the goal of ensuring that investors clearly understand the implications for eligible firms. 34

Recommendation 8

That the Government of Canada ensure that new infrastructure that has been constructed—wholly or in part—with federal funding does not contain high-carbon construction materials, particularly imported aluminum or steel produced in emissions-intensive sectors. As well, the Government of Canada should implement relevant measures—including rules, tools and compliance systems—to ensure that imports of such materials are not used in the manufacturing of any equipment or machinery that is eligible for federal tax credits created in response to similar measures contained in the United States’ *Inflation Reduction Act of 2022*..... 35



THE UNITED STATES' *INFLATION REDUCTION ACT OF 2022*: TRADE IMPACTS ON CERTAIN CANADIAN SECTORS

INTRODUCTION

Canada's ties with the United States (U.S.) are deep, dynamic and multifaceted, and—among other areas—the two countries work together in addressing trade issues of mutual concern, including supply chains and ongoing implementation of the *Canada–United States–Mexico Agreement*. In Canada and the United States, millions of jobs exist because of—and thousands of communities benefit from—the bilateral trade and investment. [Statistics Canada](#) indicates that, in 2020, about 2.0 million jobs in Canada were supported by Canadian merchandise and services exports to the United States.¹ According to the [U.S. International Trade Administration](#), in 2021, an estimated 1.3 million U.S. jobs were supported by that country's merchandise and services exports to Canada.

The United States is Canada's largest trade and investment partner. In 2022, that country was the destination for 77.0% of the value of Canada's total merchandise exports and the origin of 49.1% of its imports, the [value](#) of Canada–U.S. merchandise trade totalled \$960.9 billion and Canada had a merchandise trade surplus with the United States of about \$235.1 billion. Moreover, in 2021, the United States was the destination for 55.7% of the value of Canada's total services exports and the origin of 56.9% of its imports, the [value](#) of Canada–U.S. services trade amounted to \$160.4 billion and Canada had a services trade deficit with the United States of approximately \$5.0 billion.² In that year, the stock of Canadian direct investment in the United States [totalled](#) \$744.9 billion and the stock of U.S. direct investment in Canada was \$500.7 billion.

With a Canada–U.S. trade and investment relationship having this scale and scope, economic measures that are proposed or implemented in one country could significantly affect people, firms and communities in the other country. These measures include the

1 As of 22 March 2023, the most recent data on the number of jobs in Canada supported by Canadian merchandise and services exports to the United States were for 2020.

2 The section of the report entitled "Trade and Investment Considerations" contains two figures: the value of Canada–U.S. merchandise trade and the trade balance each year over the 2002 to 2022 period; and the value of Canada–U.S. services trade and the trade balance each year over the 2001 to 2021 period. As of 22 March 2023, services trade data were not available for 2022.



United States' [*Inflation Reduction Act of 2022*](#) (hereafter, the IRA or statute) and the [*Creating Helpful Incentives to Produce Semiconductors and Science Act of 2022*](#). Among other outcomes, through their various credits and other incentives, both of these legislative measures are expected to increase U.S production of clean energy and clean technologies, as well as investments in the United States.

On 27 July 2022, U.S. Senate Majority Leader Charles (Chuck) Schumer and Senator Joe Manchin jointly [announced](#) that they had agreed to add the provisions of the proposed IRA to the federal government's budget reconciliation bill for the 2022 fiscal year. The U.S. Senate Democrats and the Biden administration had negotiated the IRA after a previous bill—the Build Back Better Act—had failed to secure support from more than 50% of U.S. Senators, with the result that no vote was held in the Senate. The IRA contains some of the proposed Build Back Better Act's provisions, including in relation to energy and climate change.

After the U.S. Senate and the U.S. House of Representatives passed the IRA on 7 August and 12 August 2022, respectively, President Joe Biden [signed](#) the statute into law on 16 August 2022. The Biden administration's December 2022 [guidebook](#) on the IRA's clean energy and climate measures asserts that one of the statute's key objective is to ensure that the United States remains a "global leader" in various areas relating to clean energy, clean technologies, manufacturing and innovation. The IRA [allocates](#) more than US\$369 billion for clean energy and climate-related incentives over the next 10 years. As described in Appendix A of this report, the IRA contains at least 40 measures in these areas, some of which entered into force in 2022; others are expected to be implemented in 2023 or later. The guidebook's chapter entitled "Advancing and Deploying American-Made Clean Energy Technologies" is particularly relevant in the context of clean energy and clean technologies.

On 20 September 2022, the House of Commons Standing Committee on International Trade (the Committee) adopted a [motion](#) to study the impacts of the IRA on Canadian firms, with a focus on the sectors most affected; the motion particularly mentions the following sectors: critical minerals extraction, automotive and electric vehicle, and clean technologies and energy. During seven meetings held between 1 November and 13 December 2022, the Committee's witnesses comprised representatives from 19 trade associations, six firms, four organized labour groups and two university-based research institutions. As well, two individuals appeared on their own behalf and the Canadian Fuels Association submitted a brief.

The Committee's meetings occurred before the legislation to implement certain measures announced in the Government of Canada's 2022 fall economic statement

(hereafter, the economic statement), some of which are designed to respond to the IRA, received Royal Assent on 15 December 2022. For that reason, in this report, those measures are considered to be proposals. Appendix B in this report describes measures announced in the economic statement's Chapter 2, entitled "Jobs, Growth, and an Economy That Works for Everyone." Chapter 2 contains most of the economic statement's measures relating to clean energy and clean technologies. The Committee's meetings were also concluded prior to the 28 March 2023 federal budget, which proposed measures in relation to clean energy and clean technologies. Like the economic statement, some of the budget's proposals are designed to respond to the IRA.³

The first section of this report highlights witnesses' general views about the IRA's consistency with international trade rules, and the statute's impacts on trade and investment between Canada and the United States. The second section presents their observations about IRA-related challenges and opportunities for Canada's automotive, clean energy and technology, manufacturing, and metals and minerals sectors. The witnesses' proposals for Government of Canada actions to respond to the statute—whether through strategies, policies and programs of general application, sector-specific measures, measures for employees, or advocacy, consultation and collaboration—are presented in the third section, and the report concludes with the Committee's thoughts and recommendations.

Because the report's focus is the IRA's impacts on certain Canadian sectors, witnesses' comments not directly related to the Committee's motion are not summarized. These include their remarks about the following topics, some of which the Committee has examined in previous reports: border carbon adjustment mechanisms; greenhouse gas emissions; the economic impacts of the COVID-19 pandemic; North American supply chains; Ontario's Next Generation of Jobs Fund; proposed natural resources projects in Canada; trade diversification; U.S.–European Union (EU) trade disputes; various statutes and conventions; and the World Trade Organization's (WTO's) dispute-settlement mechanism.

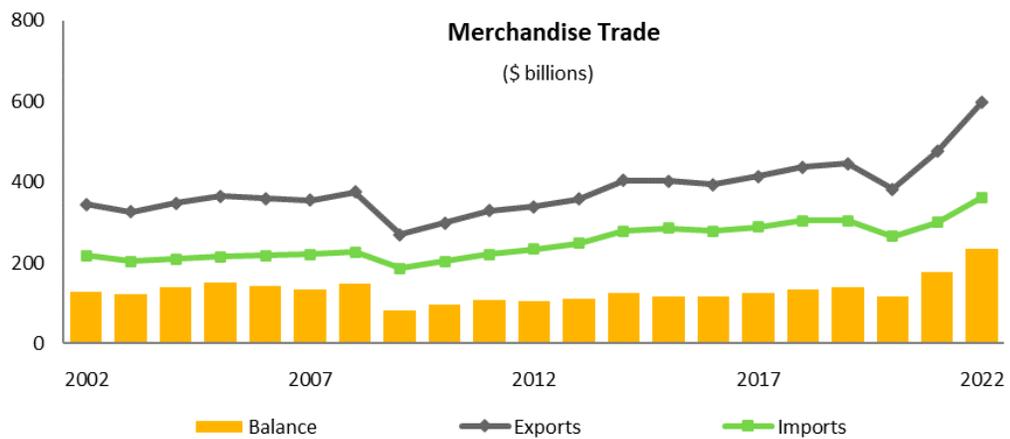
3 For more information on the proposed measures on clean energy and clean technologies that are included in the Government of Canada's 2023 federal budget, see Government of Canada, "[Chapter 3: A Made-In-Canada Plan: Affordable Energy, Good Jobs, and a Growing Clean Economy](#)," *Budget 2023*.



TRADE AND INVESTMENT CONSIDERATIONS

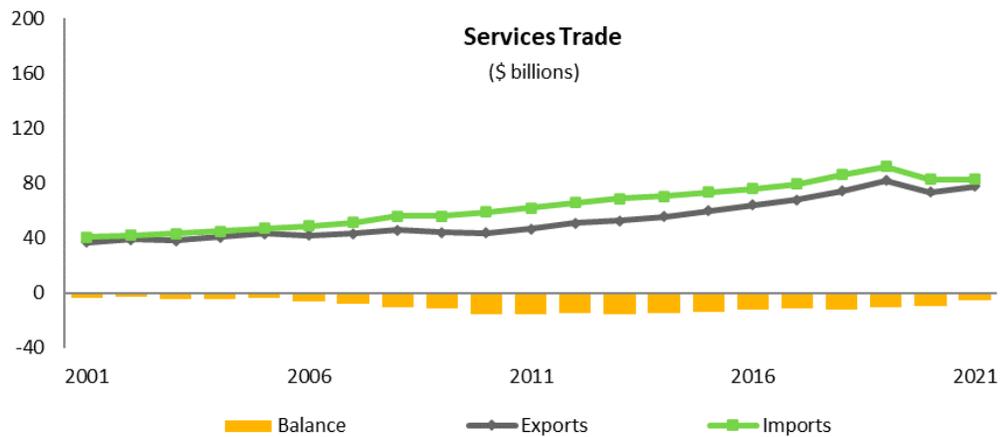
Witnesses provided the Committee with general observations about the IRA’s consistency with international trade rules, and with specific comments about the statute’s impacts on Canada–U.S. trade and investment.

Figure 1—Annual Value of Canada’s Merchandise Trade with the United States, 2002–2022



Source: Government of Canada, [Trade Data Online](#), Database, accessed 10 March 2023.

Figure 2—Annual Value of Canada’s Services Trade with the United States, 2001–2021



Note: As of 22 March 2023, services trade data were not available for 2022.

Source: Statistics Canada, [International transactions in services, by selected countries, annual \(x 1,000,000\)](#), Database, accessed 10 March 2023.

A. Consistency with International Trade Rules

Appearing as an individual, the Université de Sherbrooke's [Professor Geneviève Dufour](#) described the IRA as "illegal," and argued that the statute violates such trade conventions, rules and principles as national treatment, most-favoured-nation tariff treatment and the WTO's *Agreement on Subsidies and Countervailing Measures*. Regarding the last of these, [Professor Geneviève Dufour](#) commented that the agreement prohibits the implementation of local content subsidies, such as the IRA's federal tax credits for purchasers of zero-emission vehicles that are assembled in North America or that contain specified North American content.

The [Canadian Chamber of Commerce](#) noted that the EU is assessing whether the IRA violates the WTO's rules, and the [Canadian Labour Congress](#) remarked that the EU has identified at least nine elements in the statute that allegedly breach international trade rules. [Professor Geneviève Dufour](#) expressed concern that the EU and other jurisdictions "will turn to the WTO to challenge the legality of the [IRA], and that [such a challenge] would greatly undermine Canada's position" because some of the statute's provisions provide the country with "favourable treatment."

B. Trade and Investment

The [Canadian Labour Congress](#) characterized the IRA as an "America first" protectionist policy, suggesting that the statute's U.S.-focused goals include protecting that country's interests, creating jobs and maximizing economic growth consistent with meeting U.S. climate targets. The Canadian Global Affairs Institute's [Colin Robertson](#), who appeared as an individual, noted that both the Democratic and Republican parties have implemented protectionist measures since the United States' creation, and also drew attention to the IRA and the associated "national industrial policies," as well as to the *Creating Helpful Incentives to Produce Semiconductors and Science Act of 2022*. According to [Colin Robertson](#), Canada is not the "primary target" of U.S. protectionist trade measures, and many of the statute's provisions are "aimed at countering China."

Concerning investments, the [Business Council of Canada](#) emphasized that the IRA provides a "clear path" for attracting more investments to the United States. The [Business Council of Canada](#) also claimed that the IRA has "changed the [investment] landscape for Canada," and said that foreigners considering an investment in Canada could instead choose the United States if the statute provides them with "a more favourable environment." Furthermore, in the [Smart Prosperity Institute's](#) opinion, the IRA's incentives for attracting investments to some U.S. sectors are "clearer" than current Canadian incentives.



According to [World Energy GH2](#), the IRA provides “real [investment] certainty” and a “very elegant solution” to increasing hydrogen investments in the United States by providing U.S. hydrogen firms with a “production tax payment of up to \$3 [per kilogram] based on labour and carbon intensity.” Moreover, the [Chemistry Industry Association of Canada](#) argued that the statute’s Section 45Q Tax Credit for Carbon Oxide Sequestration is “four times better than what [the Government of Canada is] proposing.” In the [Chemistry Industry Association of Canada](#)’s view, unlike in Canada, incentives designed to attract investments to the United States “are in place at the state and federal level,” and include accelerated capital cost allowances that will not “fade away” in 2023. The [Chemistry Industry Association of Canada](#) added that constructing a facility in its sector valued at between \$5 billion and \$10 billion could take five to seven years, with the IRA’s “accelerated capital allowance” available for the entire construction period.

Maintaining that the IRA establishes the United States as a “focal point” for investments, the [Canadian Renewable Energy Association](#) stated that some of the statute’s spending provisions have contributed to the United States gaining a competitive advantage—or a “gravitational pull”—over Canada and other countries in attracting investments. Moreover, the [Canadian Renewable Energy Association](#) observed that the investment-related “benefits [and/or] the long-term policy certainty” that the IRA provides could lead a significant number of its members, particularly multinational firms, to invest in the United States rather than in Canada.

The [Business Council of Canada](#) and the [Canadian Agri-Food Trade Alliance](#) asserted that the IRA has had negative impacts on Canada’s ability to attract investments, with the latter observing that the country’s global competitiveness is also adversely affected. As well, the [Canadian Agri-Food Trade Alliance](#) speculated that certain of the statute’s provisions could disincentivize Canadian firms that are considering domestic investments.

With a climate focus, the [Canadian Steel Producers Association](#) indicated that the “scale and breadth” of the issues addressed in the IRA could lead some Canadian firms to face an “increasing risk of failing to attract the significant investments required to decarbonize.” The [Canadian Steel Producers Association](#) also said that, unlike Canadian firms, U.S. firms will benefit from the statute’s “investments and climate subsidies without facing (a) carbon cost.” In the Canadian Steel Producer Association’s opinion, Canadian firms are competing in a “global race” with U.S. and other foreign firms to attract investments. Similarly, [United Steelworkers](#) expressed concerns that the IRA’s incentives for investments in clean technologies provide U.S. steel producers with a “double advantage” because they do not have a carbon tax applied on them.

[United Steelworkers](#) underscored that, as a result of the implementation of the IRA, Canada “must not be relegated to being a site of resource extraction with minimal additional development of downstream manufacturing capabilities.” Citing certain manufacturing investments in Canada, United Steelworkers pointed out that Canada has “taken some initiatives” regarding “strategic green investments,” but noted that more should be done and in a way that “includes” employees. As well, United Steelworkers drew attention to manufacturing projects involving steel firms headquartered in Canada, including Algoma Steel Inc. and ArcelorMittal Dofasco.

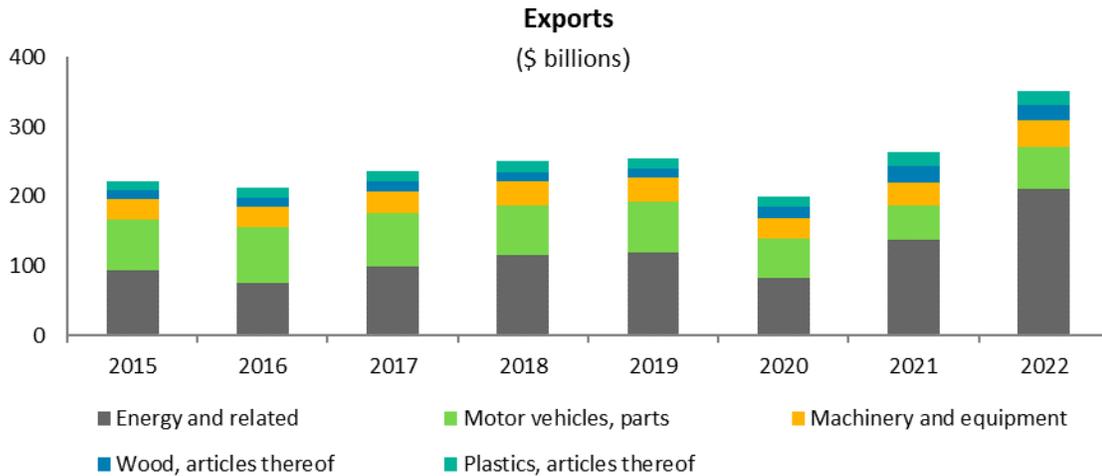
Finally, according to [Toyota Motor Manufacturing Canada Inc.](#), a number of multinational firms operating in Canada have “paused” their investment activities in the country because they are both uncertain and concerned about the IRA’s “true impact[s]” on Canada’s automotive and other sectors. Toyota Motor Manufacturing Canada Inc. stressed that this pause has affected these firms’ internal deadlines for making investments in Canada.

CHALLENGES AND OPPORTUNITIES FOR CERTAIN CANADIAN SECTORS

The Committee’s witnesses identified some of the IRA-related challenges and opportunities for Canada’s automotive, clean energy and technology, manufacturing, and metals and minerals sectors.

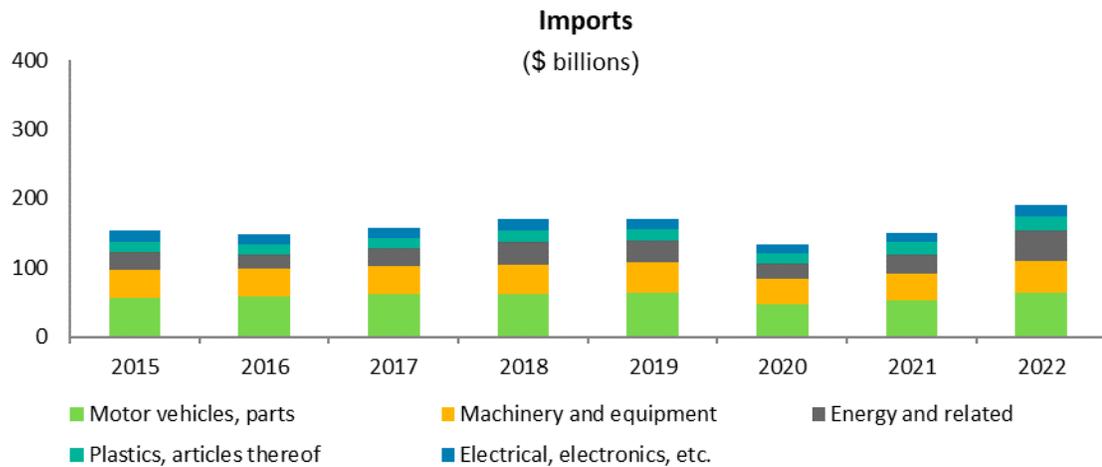


Figure 3—Canada’s Most Highly Valued Merchandise Exports to the United States, 2015–2022



Source: Government of Canada, [Trade Data Online](#), Database, accessed 10 March 2023.

Figure 4—Canada’s Most Highly Valued Merchandise Imports from the United States, 2015–2022



Source: Government of Canada, [Trade Data Online](#), Database, accessed 10 March 2023.

A. Automotive

Regarding challenges for Canada’s automotive firms, [Unifor](#) asserted both that the IRA is not intended to be a “let’s help Canada” measure and that the statute is not aimed at

ensuring the “build[ing] out” of Canada’s automotive sector. [Toyota Motor Manufacturing Canada Inc.](#) described the IRA as an “act of trade protectionism” that seeks to “forc[e] the onshoring” of certain automotive production capabilities to the United States from abroad at the expense of Canada and other countries. Moreover, [Global Automakers of Canada](#) contended that Canada’s automotive sector “is at a crossroads,” and remarked that some of the IRA’s “truly massive subsidies” for clean technologies could affect the ability of Canada’s automotive sector to retain “clean tech investment[s]” and to compete with the U.S. sector.

The [Canadian Vehicle Manufacturers' Association](#) emphasized that Ford Motor Company of Canada, General Motors of Canada Company and Stellantis Canada are “leading the charge” domestically regarding the electrification of transportation by collectively “invest[ing] \$13.5 billion, [and] creating thousands of jobs.” [Global Automakers of Canada](#) noted that it is “pleased” that the IRA’s tax credits for zero-emission vehicles are available to U.S. purchasers of Canadian-produced electric vehicles if those vehicles meet the statute’s requirements regarding North American content and assembly. However, Global Automakers of Canada added that, because the mining of critical minerals and North American battery production are “in their nascent development stages,” only 25 of the 70 electric vehicle models that were available for sale in the U.S. market as of 15 November 2022 met the IRA’s content and assembly requirements.

Concerning opportunities for Canada’s automotive firms, the [Canadian Vehicle Manufacturers' Association](#) characterized the IRA as the “most significant development” for the country’s automotive sector since the *Canada–United States–Mexico Agreement’s* entry into force in July 2020. The [Canadian Labour Congress](#) pointed out that “the magnitude and the scope” of the statute’s provisions create opportunities for Canada to expand its production of vehicles and other goods, such as steel. Furthermore, [Unifor](#) stated that the IRA could “bolster” the production of zero-emission vehicles in Canada and the United States.

Finally, [Unifor](#) mentioned that the IRA’s measures for purchasers of zero-emission vehicles, including electric vehicles, provide Canada’s automotive sector with a “much brighter future” than would have been the case with the proposed Build Back Better’s tax credits. According to Unifor, those credits would have “devastated” Canada’s automotive sector, including in relation to zero-emission vehicles. As well, [Unifor](#) referred to the IRA’s measures for purchasers of these vehicles as the “first-ever example of a buy-continental” measure, claiming that the implementation of such measures could “present pathways” for resolving trade disputes between Canada and the United States concerning local content provisions.



B. Clean Energy and Clean Technology

Regarding challenges for Canada’s clean energy and clean technology firms, the [Explorers and Producers Association of Canada](#) drew attention to Canada’s “world leader[ship]” in decarbonization efforts, and said that the country could “risk losing its leadership position” to the United States because of the IRA’s US\$850 million in incentives for methane monitoring and mitigation in the U.S. oil and gas sector. Moreover, [Canada's Building Trades Unions](#) commented that the statute leads the United States to be “clearly in the driver's seat” concerning clean energy investments and production, with [Canada's Building Trades Unions](#) observing that the IRA’s clean energy incentives establish that country as “a very attractive market” for investments.

[Canada's Building Trades Unions](#) also underlined that the amount that can be claimed with a number of the IRA’s clean energy credits, including the nuclear power credit and the clean electricity investment credit, can be “increased to five times as much” if certain conditions are met. As well, Canada’s Building Trades Union noted other energy-related incentives in the statute, including the hydrogen production credit, the energy-efficient commercial buildings deduction, and the carbon capture and sequestration credit. Concerning the IRA’s carbon capture–related provisions, [Carbon Infrastructure Partners Corp.](#) remarked that such provisions could result in certain firms relocating their clean technology investments from Canada to the United States if Canada “continues not to be competitive [regarding carbon capture, utilization and storage] and carbon management.”

The [Canadian Biogas Association](#) stressed that, in August 2022, the IRA’s clean energy investment tax and production credits—including a production credit of US\$0.026 per kilowatt-hour for clean energy produced in the United States—led some firms to pause “permanently” their investments in Canadian renewable natural gas and other biogas projects. As well, the Canadian Biogas Association contended that such incentives have “made Canada an uncompetitive investment jurisdiction over night,” particularly in the production of biogas.

Outlining a number of ongoing and potential large-scale clean energy projects in Alberta, New Brunswick, Ontario and Saskatchewan, the [Canadian Nuclear Association](#) cautioned that these projects and other investments in Canada’s production of nuclear energy could be “squandered” if the country’s nuclear firms are “unable to remain competitive,” particularly because of the IRA. Furthermore, according to the [Canadian Nuclear Association](#), the “very significant underappreciation of the sheer amount of electricity infrastructure” that Canada is “going to have to build out over the next 30 years or so” is something that “keeps [the Canadian Nuclear Association’s leadership]

up at night.” In the Canadian Nuclear Association’s view, substantial increases in Canada’s “electricity [power generation] infrastructure” requires the country to begin the “planning [phase] to be able to build out” the amount of infrastructure that will be needed.

With a focus on Canada’s clean electricity subsector, [Electricity Canada](#) maintained that the IRA creates “significant” challenges in attracting and retaining clean energy investments in Canada. Electricity Canada emphasized that the statute makes the United States a “more appealing jurisdiction” than Canada for making such investments, which “risks slowing” Canada’s efforts to decarbonize its electricity grid.

Referring to the BlueGreen Alliance’s October 2022 study on the IRA that estimated the creation of more than 9 million jobs in the U.S. clean energy and clean technology sectors, the [Canadian Chamber of Commerce](#) commented that this increased demand for labour will affect the ability to attract and retain the skilled employees required to “drive [Canada’s] green economy.” The [Canadian Association of Energy Contractors](#) and the [Smart Prosperity Institute](#) mentioned the need to prevent Canadian energy firms and employees from relocating to the United States because of the statute’s provisions that aim to create new economic and employment opportunities in that country. Moreover, [Bioindustrial Innovation Canada](#) and the [Canadian Biogas Association](#) characterized the IRA’s clean energy provisions as a “threat” to Canada’s clean energy and clean technology sectors, with consequences for their competitiveness, production capabilities and number of jobs.

The [Canadian Chamber of Commerce](#) stated that some of the IRA’s incentives for U.S. development and production of clean fuels and clean technologies could negatively affect the competitiveness of Canadian firms. Providing examples, the Canadian Chamber of Commerce identified tax credits and other supports for U.S. production of hydrogen, biogas and other clean fuels, as well as such clean technologies as carbon capture, utilization and storage. The Canadian Chamber of Commerce added that that the statute contains certain “credit multipliers” for clean energy and clean technologies that meet some domestic content and labour requirements.

[Parkland Corporation](#) explained that the IRA “expands” U.S. incentives for clean fuels through the “blender’s tax credit,” a “producer tax credit” and a new credit for the use of sustainable aviation fuel. According to Parkland Corporation, these incentives provide U.S. clean fuel firms with a competitive advantage over their Canadian counterparts because, as of 29 November 2022, Canada had “no comparable [clean fuel] incentives.” [Parkland Corporation](#) also stressed that the statute’s clean fuels production tax credits



ensure that U.S. clean fuel firms' production costs are lower than those of Canadian firms.

The [Canadian Fuels Association](#)'s brief highlighted concerns that the IRA's clean fuel production credit and incentives for hydrogen production could contribute to certain clean fuel investments being made in the United States rather than in Canada. According to the brief, in 2023, the statute's clean fuel production credit will apply to ethanol, biodiesel, renewable diesel and sustainable aviation fuel. Furthermore, [Bioindustrial Innovation Canada](#) asserted that the IRA's investment tax and production credits for clean fuels could make it "a bit easier" for some Canadian and multinational clean fuel firms to relocate their "manufacturing, skill sets and jobs [from Canada to the United States]."

In the [Cement Association of Canada](#)'s view, the IRA's allocation of US\$369 billion for clean energy and climate-related incentives creates a "significant risk" for Canadian firms that want to invest in domestic production of certain clean technologies, such as carbon capture, utilization and storage. The Cement Association of Canada suggested that such incentives place Canadian firms at a competitive disadvantage when compared to their U.S. counterparts, adding that—as of 13 December 2022—the statute was providing greater funds to U.S. clean energy and clean technology firms than Canada was providing to domestic firms. As well, the Cement Association of Canada indicated that the IRA contains an incentive for clean technology firms that compensates them for each tonne of carbon dioxide that they sequester.

Concerning opportunities for Canada's clean energy and clean technology firms, the [Canadian Labour Congress](#) observed that the IRA's labour provisions could increase the number of new jobs in Canada's clean energy and clean technology sectors, and expressed its hope that most of these jobs would be "union jobs, which [are] important in transitioning workers to a low-carbon economy."

C. Manufacturing

Regarding challenges for Canada's manufacturing firms, [Canadian Manufacturers & Exporters](#) underscored that the IRA has "radically" increased the amount of federal funding for U.S. manufacturing firms, which could result in the "flight of capital investment out of Canada and into the [United States]," a reduction in the number of Canadian manufacturing jobs, and a decrease in the value and volume of Canadian exports of manufactured goods. In relation to opportunities for domestic manufacturing firms, the [Canadian Labour Congress](#) said that the statute creates certain opportunities

for manufacturers of clean technologies, such as electric vehicles and their batteries, and “low-carbon construction materials.”

With an automotive focus, the [Automotive Parts Manufacturers' Association](#) and [Toyota Manufacturing Canada Inc.](#) supported the “defeat” of the proposed Build Back Better Act, which the former argued would have posed “the biggest existential threat” to Canada’s manufacturing of automotive parts. However, the latter referred to the IRA as a “double-edged sword” for Canadian manufacturers of electric vehicles and other clean technologies. Toyota Manufacturing Canada Inc. explained that, although the statute’s tax credits for zero-emission vehicles are available to U.S. purchasers of certain Canadian-produced electric vehicles, some credits for the manufacturing of other clean technologies—including batteries for zero-emission vehicles—are available only if those goods are produced in the United States.

In [Toyota Manufacturing Canada Inc.’s](#) opinion, “despite already generous incentives ... from [the Government of Canada] and provincial governments,” the IRA’s tax credits for the manufacturing of batteries for zero-emission vehicles—estimated to total US\$1 billion annually—could “undercut” investments in Canadian battery manufacturing. [Toyota Manufacturing Canada Inc.](#) also pointed out that, although the “defeat” of the proposed Build Better Act benefits Canada, the credits contained in the IRA could provide firms throughout the world with an incentive to invest in “gigafactory-scale battery operations” in the United States rather than in Canada.

The [Canadian Vehicle Manufacturers' Association](#) asserted that the “size and scale” of the IRA’s Section 45X, which includes a refundable Advanced Manufacturing Production Credit for particular types of U.S. batteries, affects the ability of Canadian battery manufacturers to compete with their U.S. counterparts for investments. As well, the [Canadian Vehicle Manufacturers' Association](#) indicated that this credit—available in the amount of up to US\$45 per kilowatt-hour—can be claimed by firms that “manufacture battery cells and modules” in the United States. Citing the example of a “typical facility [for manufacturing battery cells and modules] with 30 gigawatt hours of [production] capacity,” the Canadian Vehicle Manufacturers’ Association maintained that the credit’s annual value for such a facility would exceed US\$1 billion.

Concerning the agri-food sector, the [Canadian Agri-Food Trade Alliance](#) commented that, in addition to providing more than US\$3 billion in loans to “underserved” U.S. farmers, ranchers and foresters, the IRA allocates US\$40 billion to agriculture, forestry and rural development. The [Canadian Agri-Food Trade Alliance](#) also drew attention to the negative impact of these measures on the competitiveness of Canada’s food manufacturing subsector and its ability to attract investments.



D. Metals and Minerals

Regarding challenges for Canada’s metals and minerals firms, the [Canadian Steel Producers Association](#) characterized the IRA as an “important shift” within the United States in relation to climate change and energy security. [United Steelworkers](#) remarked that one objective of the statute and other U.S. climate–related measures is ensuring that U.S. steel and other manufacturing firms “survive” and “thrive” during that country’s “green transition.” Furthermore, the [Canadian Steel Producers Association](#) indicated that the IRA’s climate-related measures—including subsidies—will help the U.S. steel subsector to reduce its carbon emissions and to manufacture “green steel,” and observed that the statute does not “envision” the implementation of a price on carbon.

Although not expressing opposition to Canada’s carbon tax, [United Steelworkers](#) highlighted that multiple policy responses may be needed to address the negative impacts of the IRA on Canadian firms. In particular, [United Steelworkers](#) was concerned that the statute’s clean technology incentives and its lack of a carbon pricing measure provide U.S. steel firms with “a double [competitive] advantage” when compared to Canadian steel firms. Regarding carbon pricing, United Steelworkers opposed an increase in Canada’s carbon tax and indicated support for carbon border adjustments. As well, the [Canadian Steel Producers Association](#) and [United Steelworkers](#) suggested, without a federal carbon pricing measure, U.S. steel firms will have lower carbon costs than their Canadian counterparts, with [United Steelworkers](#) stressing that the production of steel will “cost more” in Canada than in the United States.

Commenting on opportunities for Canada’s metals and mining firms, [Unifor](#) contended that the IRA’s provisions requiring automotive firms to “use responsibly sourced critical minerals and rare earth elements” could support Canadian efforts to develop further the domestic critical minerals subsector. Unifor stated that, by 2027, the statute will require at least 80% of the value of the critical minerals contained in an electric vehicle’s battery to be extracted or processed in the United States or in a jurisdiction that is a U.S. trade agreement partner. [Clean Energy Canada](#) and the [Canadian Vehicle Manufacturers’ Association](#) emphasized that Canada is one of the few countries in the world from which U.S. battery producers will be able to source some of the critical minerals needed to meet the IRA’s content requirements for U.S. battery production.

The [Canadian Vehicle Manufacturers’ Association](#) said that, because of national security considerations, the United States has relied on such measures as the U.S. *Defense Production Act* to “secure” a North American supply chain for critical minerals, and added that the United States considers Canada to be a source for these minerals.

Referencing the effect of the 2022 blockades at certain ports of entry along the Canada–U.S. border on Canada’s trade in critical minerals, the [Automotive Parts Manufacturers' Association](#) stressed that Canada “undercut[s] [its] ability to sell” to the United States when it “allow[s] dozens of people to cost [it] hundreds of millions of dollars a day in [its] most critical industries” because of such blockades.

With a focus on the IRA’s impacts on Canada’s aluminium subsector, the [Aluminium Association of Canada](#) expressed its hope that the statute will lead to increased U.S. demand for Canadian products that contain aluminium, and pointed out that Canadian aluminium smelters might be able to “capture some of that increase in demand.” Commenting that Canadian aluminium firms compete with their counterparts in the Middle East and the Indo-Pacific region when exporting aluminium to the United States, the [Aluminium Association of Canada](#) underscored that Canada’s aluminium subsector has “the lowest carbon footprint in the world.”

GOVERNMENT OF CANADA ACTIONS

In speaking to the Committee, witnesses made general comments about the IRA’s consequences for Canada and about the ways in which the Government of Canada should respond to the statute. As well, in identifying specific measures—existing and new—that could be part of a federal response, they addressed the following: a national industrial strategy, and other strategies, policies and programs; measures in relation to fossil-based energy; measures in relation to non-fossil-based energy and clean technologies; automotive-related measures; employee-related measures; and advocacy, consultation and collaboration.



Table 1—Selected Government of Canada Measures Concerning Climate, Clean Energy and Clean Technologies, as of 27 March 2023

Measure	Brief Description
<u>Canadian Critical Minerals Strategy</u>	Federal plans to increase Canada’s supply, production and processing of critical minerals, among other objectives.
<u>Carbon Capture, Utilization, and Storage Tax Credit</u>	Tax credit for investments in carbon capture, utilization and storage projects in Canada.
<u>Clean Energy for Rural and Remote Communities Program</u>	\$300-million program directed at low-carbon energy projects in Indigenous, rural and remote communities across Canada.
<u>Clean Fuels Fund</u>	Funding to increase Canada’s production of clean fuels, such as ethanol, hydrogen, renewable diesel and natural gas, synthetic fuels and sustainable aviation fuel.
<u>Emissions Reduction Fund</u>	\$750 million for repayable and non-repayable loans to eligible oil and gas firms in Canada for the installation of equipment that reduces methane emissions.
<u>Greenhouse Gas Pollution Pricing Act</u>	Legal framework establishing a federal price for greenhouse gas emissions, comprising an output-based pricing system for industrial facilities and a regulatory charge for fossil fuels.
<u>Incentives for Zero-Emission Vehicles Program</u>	Program providing consumer incentive of up to \$5,000 per eligible purchase or lease of a designated light-duty zero-emission vehicle.
<u>Incentives for Medium- and Heavy-Duty Zero-Emission Vehicles Program</u>	Program providing consumer incentive of up to \$200,000 per eligible purchase or lease of a designated medium-duty or heavy-duty zero-emission vehicle.
<u>Smart Renewables and Electrification Pathways Program</u>	Program providing about \$1.6 billion in direct financial support over eight years for renewable energy and grid modernization projects in Canada.
<u>Strategic Innovation Fund</u>	Funding for innovative clean energy and clean technologies projects, among others. Fund includes the <u>Net Zero Accelerator Initiative</u> , which provides financing for projects that will reduce greenhouse gas emissions, support the development of clean technologies, and decarbonize sectors that are high emitters of greenhouse gas emissions.

Measure	Brief Description
Zero Emission Vehicle Infrastructure Program	\$680-million program directed at deployment and construction of charging infrastructure for zero-emission vehicles.

Sources: Canada Revenue Agency, [Carbon pollution pricing—what you need to know](#); Innovation, Science and Economic Development Canada, [Programs and initiatives](#); Government of Canada, [Clean Technologies](#); Government of Canada, [Budget 2022](#); Government of Canada, [Introducing Canada’s Critical Minerals Strategy](#); Natural Resources Canada, [Green infrastructure programs](#); Natural Resources Canada, [Funding, Grants and Incentives](#).

A. General Comments

Highlighting some of the IRA’s consequences for Canada, [Canada's Building Trades Unions](#), the [Canadian Labour Congress](#), [Electricity Canada](#) and [Clean Energy Canada](#) characterized the statute as a “game changer,” and the [Canadian Labour Congress](#), the [Canadian Biogas Association](#) and the [Cement Association of Canada](#) stressed that the Government of Canada should respond to the IRA in a timely manner.

The [Canadian Renewable Energy Association](#) suggested that the Government of Canada should consider federal actions that would “match the strategic ambition” of the IRA, with the [Cement Association of Canada](#) making a comparable proposal. [Canadian Manufacturers & Exporters](#) remarked that the ability of some Canadian firms to compete “on an even footing” with their U.S. counterparts “will be weakened” unless the Government matches the statute’s incentives. The [Chemistry Industry Association of Canada](#) described the transparency and certainty of the IRA’s investment incentives as the “biggest challenge” for Canada.

[Canada's Building Trades Unions](#) stated that the Government of Canada should respond to the IRA in ways that acknowledge the country’s competitive advantages, and not “line by line” to all of the statute’s incentives. Similarly, [Clean Energy Canada](#) urged the Government to be “strategic,” and to focus on Canada’s “competitive advantages” and the sectors in which the country can compete. The Canadian Global Affairs Institute’s [Colin Robertson](#) also supported identifying—and concentrating on—sectors in which Canada is a leader. Moreover, the [Business Council of Canada](#) said that the economic statement contains “interesting measures and measures that are more targeted,” but contended that—in the context of the IRA—whether the proposed measures would “level the playing field” with the United States would not be known until details about them are provided. According to the [Business Council of Canada](#) and [Global Automakers of Canada](#), the 2023 federal budget should contain more details.



Recognizing that some of the measures announced in the economic statement are designed to respond to the IRA, the [Canadian Renewable Energy Association](#) considered these proposed measures to be—overall—a “really positive start.” The [Canadian Hydrogen and Fuel Cell Association](#) and [Electricity Canada](#) underscored that these measures are a “good first step,” with the former also observing that they are just that: a “first step.” In particular, the [Canadian Hydrogen and Fuel Cell Association](#) described three measures proposed in the economic statement—the investment tax credit for clean technologies, the investment tax credit for clean hydrogen and the Canada Growth Fund—as “great news” for Canada’s clean energy and clean technology sectors.

As well, [Electricity Canada](#) suggested that the measures announced in the economic statement would help to “begin the process of accelerat[ing]” investments and the development of mechanisms that would “make Canada’s [electricity] grid green by 2035 and bring the country to net-zero carbon emissions by 2050.” Among the proposed measures, Electricity Canada drew attention to the \$250 million allocation for “sustainable jobs” training and funding to “accelerate approvals for major projects by expanding the capacity of regulatory bodies.”

[Renewable Industries Canada](#) focused on production incentives, arguing that the investment tax credits proposed in the economic statement may not be “large enough to offset the threat posed by the subsidized production” in the United States. As well, the [Cement Association of Canada](#) asserted that the announced measures do not include production incentives.

In the [Chemistry Industry Association of Canada](#)’s view, in contrast to the United States’ approach whereby the country’s sectors are on a “nice” list, Canada’s approach involves domestic sectors being placed on a “naughty” list. Adding that “some very fortunate few” domestic sectors are on the “nice” list and consequently receive “hand-picked access” to federal grants, tax measures, loans and other incentives to assist with decarbonization, the Chemistry Industry Association of Canada argued that the criteria that must be met for a sector to be on Canada’s “nice” list are not transparent and are not “available to everybody.” As well, the Chemistry Industry Association of Canada commented that this approach disadvantages Canada because a lack of transparency and certainty hinders the country’s ability to attract investments for decarbonization projects.

[World Energy GH2](#) characterized the economic statement as “very positive,” but pointed out that financial modelling and business planning will not be possible without detailed information regarding the proposed tax credits’ application. As well, [World Energy GH2](#) said that the Government of Canada should provide domestic clean energy and

technology firms with support measures that are “clear and simple”—such as a production incentive—to facilitate financing because financial institutions “will not want to get into an argument with the [federal] government over whether or not [a firm] qualif[ies] for a certain program.”

Finally, regarding Canada’s aluminium subsector, the [Aluminium Association of Canada](#) emphasized that the Government of Canada should collaborate with provincial governments in designing and implementing measures aimed at fostering innovation, as well as research and development, within that subsector. The [Aluminum Association of Canada](#) suggested that these measures could include “a restructuring of the fiscal framework to allow for major industrial investment” in the automation of certain machinery used to produce aluminium, and accelerated depreciation of capital expenditures for aluminium firms. As well, the Aluminium Association of Canada called on the Government to support the development of artificial intelligence that would enhance the domestic production of aluminium.

B. A National Industrial Strategy, and Other Strategies, Policies and Programs

Concerning a national industrial strategy, the [Business Council of Canada](#), [Canadian Manufacturers & Exporters](#), the [Canadian Steel Producers Association](#), [Global Automakers of Canada](#) and the Canadian Global Affairs Institute’s [Colin Robertson](#) proposed the development and implementation of such a strategy to respond to the IRA and its impacts on Canada.

According to the Canadian Global Affairs Institute’s [Colin Robertson](#), a national industrial strategy should be developed “in tandem” with Canada’s largest trading partners. Similarly, the [Business Council of Canada](#) stated that the Government of Canada should examine the ways in which the country’s trading partners and competitors are “leading the way with industrial policy.” [Canadian Manufacturers & Exporters](#) underlined its longstanding support for an “overarching industrial strategy” for Canada, and suggested that implementation of the “blueprint” in the Industry Strategy Council’s 2020 report entitled “Restart, recover, and reimagine prosperity for all Canadians” could enable the country to “move away from the reactive, responsive ‘chasing cars’ attitude” to an approach approximating that outlined in the IRA and similar U.S. initiatives. Furthermore, the [Canadian Vehicle Manufacturers' Association](#) stressed the need for “action on the things that have to be done,” calling for a doubling of Canada’s capacity to generate electricity, enhanced charging infrastructure for zero-emission vehicles, and coordination among federal departments to address the electrification of transportation.



The [Canadian Vehicle Manufacturers' Association](#) noted that the IRA “earmarks funding for the construction, modification or repowering of generation and transmission facilities,” and urged the Government of Canada to take the following actions: develop a “comprehensive plan to build a public [electric vehicle] charging network”; make investments in “clean, affordable and reliable electricity and grid infrastructure”; and increase the affordability of zero-emission vehicles for consumers, particularly through enhanced incentives.

The [Canadian Steel Producers Association](#) claimed that, in developing a national industrial strategy, it is important to understand how to achieve and measure “industrial competitiveness as industries transform in a net-zero economy.” From a similar environmental perspective, [Global Automakers of Canada](#) observed that the United States is using an industrial strategy to reduce greenhouse gas emissions and otherwise address climate change, and emphasized that the Government of Canada should adopt the same comprehensive approach that the United States is pursuing.

Regarding other strategies, the [Canadian Chamber of Commerce](#) highlighted that the IRA is expected to “create over nine million climate tech jobs in the United States by 2032,” and drew attention to the need for Canada’s governments, private-sector stakeholders and educational institutions to collaborate in developing a “green jobs strategy.” The [Canadian Renewable Energy Association](#) speculated that the Government of Canada’s funding for the “recycling [of batteries and their components] in order to support a resilient critical minerals strategy” will be “essential.”

With a focus on federal policies, the [Canadian Steel Producers Association](#) commented that the IRA provides incentives for additional green procurement policies in the United States, and contended that—to date—Canada’s lack of procurement policies has led domestic “green steel” products to be less competitive than carbon-intensive steel imports. Underlining that green procurement policies should be part of the Government of Canada’s response to the IRA, [United Steelworkers](#) argued that “stronger” Canadian policies in this area are required to ensure both the use of “clean steel, aluminum, wood and cement” in the country’s infrastructure projects and the creation of “good jobs.” The [Cement Association of Canada](#) maintained that, because of the increased cost of producing net-zero cement using carbon capture, utilization and storage technologies, governments can play “a leading role” concerning the procurement of “lower carbon goods.”

In relation to federal programs, the [Canadian Vehicle Manufacturers' Association](#) described the Strategic Innovation Fund as a “good program” that should be enhanced because the IRA has led the “competitive landscape” to shift. Similarly, the [Aluminium](#)

[Association of Canada](#) stated that its members have benefited—and are still benefiting—from the Strategic Innovation Fund, which is “very well-designed,” very important to the aluminium subsector, “WTO-compliant” and “accessible.” That said, the Aluminium Association of Canada also indicated that accessing the fund is “a little burdensome in terms of paperwork and follow-up.” The [Canadian Steel Producers Association](#) characterized the Net Zero Accelerator Initiative as a “very good tool” for sectors that are “very heavy emitters [of greenhouse gases] and require investments at a very significant scale.” Moreover, [Canada's Building Trades Unions](#) pointed out that the Union Training and Innovation Program that is part of the Canadian Apprenticeship Strategy has facilitated the purchase of equipment that helps to train employees on the use of “new technologies of the future to help with decarbonization.”

Finally, concerning the federal regulatory process, the [Canadian Renewable Energy Association](#) mentioned that the Government of Canada’s response to the IRA should include “stronger regulatory signals that provide long-term certainty” about “longer term carbon pricing.” The [Aluminium Association of Canada](#) reasoned that Canada cannot “compete” with the IRA but can rely on its natural “comparative assets,” adding—however—that Canadian aluminium firms cannot “wait 12 years to get projects underway.” [Electricity Canada](#) suggested that expanding the capacity of Canada’s regulatory bodies with the goal of more timely approvals of major projects is “vitaly important” in helping Canada to “keep pace” with the United States. Electricity Canada also called on the Government to remove “undue cost, delay and impediment for clean electricity project developments and operation.”

C. Measures in Relation to Fossil-Based Energy

With a particular focus on measures announced in the economic statement, the [Canadian Hydrogen and Fuel Cell Association](#) considered the proposed investment tax credit for clean hydrogen and the proposed investment tax credit for clean technologies to be “great news.” In the Canadian Hydrogen and Fuel Cell Association’s opinion, these proposed credits and the proposed Canada Growth Fund would “help incentivize domestic production of low-carbon hydrogen.” As well, the [Canadian Hydrogen and Fuel Cell Association](#) encouraged the Government of Canada to support the country’s clean hydrogen sector in two ways: by considering an expanded scope for the proposed investment tax credit for clean hydrogen to include “operational costs beyond capital costs”; and—with a view to attracting investments to Canada instead of the United States—by making the proposed investment tax credits “functional and clear,” with investors provided with examples of how these credits would work for firms.



Also discussing the investment tax credits proposed in the economic statement, the [Business Council of Canada](#) underscored the “significant lack of detail” about them, and claimed that—for firms that are operating in both Canada and the United States, and that are making investments to reduce their carbon footprint—the IRA’s incentives are relatively better and the associated “rules are clearer.” According to the [Smart Prosperity Institute](#), the Government of Canada has not provided adequate information about the “specifics” and the “mechanics” of the proposed investment tax credit for clean hydrogen.

In relation to hydrogen, the [Canadian Hydrogen and Fuel Cell Association](#) noted the IRA’s investment incentives for the U.S. hydrogen sector, and urged the Government of Canada to provide incentives for the domestic hydrogen sector. In particular, the Canadian Hydrogen and Fuel Cell Association highlighted that the Strategic Innovation Fund and the Clean Fuels Fund are “great signals of the ambition” that the Government has for the country’s clean technologies. Moreover, [Canada's Building Trades Unions](#) discussed hydrogen projects in Alberta and Newfoundland and Labrador, referring to these and other projects as examples of Canadian efforts to construct new clean energy infrastructure that were undertaken prior to and following enactment of the IRA.

Concerning Canada’s oil and gas sector, with the potential loss of up to 450,000 jobs by 2050 as the country focuses on a “just transition” from fossil fuel–based to renewable energy sources, [Canada's Building Trades Unions](#) encouraged the Government of Canada to take three actions: use the competitive advantage that the country has in its labour force; not “leave any workers behind”; and ensure that jobs lost because of the transition are replaced with “good, union-paying jobs in the new energy sources of the future.”

With regard to carbon capture, the [Canadian Association of Energy Contractors](#) said that Canada’s market size and structure do not allow the Government of Canada to “respond in kind to the IRA,” but suggested that the Government could “spearhead innovation in energy transition,” provide the tools needed to lead decarbonization efforts, and create a refundable tax credit equivalent to “up to 50% of the capital investments required to accelerate the deployment of carbon-abating technologies in the energy services sector.” In the [Cement Association of Canada](#)’s view, when compared to the IRA’s incentives, Canada’s investment tax credit for carbon capture, utilization and storage projects is—on its own—insufficient to support such projects. However, the Cement Association of Canada maintained that the credit could be sufficient and would provide “investor confidence” if the credit and “some of the other financing mechanisms” that have been announced for the proposed Canada Growth Fund are implemented quickly.

Finally, focusing on drilling and services rigs, the [Canadian Association of Energy Contractors](#) mentioned that there is a lack of clarity about whether these rigs will be covered by the proposed investment tax credit for clean technologies announced in the economic statement. Moreover, the [Canadian Association of Energy Contractors](#) argued that such a credit is “critical” in order for the drilling and well servicing sector to “be able to decarbonize.”

D. Measures in Relation to Non-Fossil-Based Energy and Clean Technologies

Discussing biogas and renewable natural gas projects, the [Canadian Biogas Association](#) commented that the IRA provides “certainty and a competitive edge that will fuel growth of the [United States'] biogas and clean energy industry for years to come.” Moreover, the [Canadian Biogas Association](#) remarked that the economic statement’s proposed investment tax credit for clean technologies would not apply to biogas and renewable natural gas projects in Canada. The [Canadian Biogas Association](#) asserted that, consequently, Canada is “missing a tool in its tool box.”

In relation to nuclear energy, [Canada's Building Trades Unions](#) stated that the Government of Canada should prioritize the country’s nuclear sector when responding to the IRA because that sector is one in which Canada has a competitive advantage. In the [Canadian Nuclear Association](#)’s opinion, the Government should ensure that, “just like with the IRA,” government-owned utilities have equitable access to investment tax credits. The [Canadian Nuclear Association](#) also called on the Government to include nuclear energy in its Green Bond Framework, emphasizing that some of Canada’s green bonds, clean energy tax credits and accelerated capital cost allowances “have not been extended to nuclear [energy].” As well, the [Canadian Nuclear Association](#) stressed that regulatory treatment and support measures should be aligned between Canada and the United States as both countries transition to clean energy sources.

With a focus on low-carbon fuels, the [Canadian Fuels Association](#)’s brief noted that— from Canada’s perspective—the IRA will result in “intensified competition for investment with more low-carbon energy projects projected to locate” in the United States. The brief also indicated that the 2023 federal budget should announce two measures: a time-limited production tax credit for low-carbon fuels made in Canada; and \$200 million for infrastructure upgrades relating to low-carbon transportation fuels. Likewise, [Parkland Corporation](#) proposed that the next budget should announce production tax credits for low-carbon fuels that are equivalent to those in the IRA. Furthermore, [Bioindustrial Innovation Canada](#) advocated the creation of a production



tax credit that would be “equivalent to the 62¢ [Canadian] per litre” that the IRA provides for sustainable aviation fuel.

Finally, commenting on the “clean economy,” the [Business Council of Canada](#) predicted a “significant shift in long-term trade flows across North America” and a loss of “well-paid jobs” if the Government of Canada does not act quickly to respond to the IRA’s “generous support incentives.” Furthermore, in the [Canadian Steel Producers Association](#)’s view, the Government’s “strategic” response to the IRA should “focus on the system-level solutions that can actually help many industries” decarbonize, including those that are very heavy emitters of greenhouse gases.

E. Automotive-Related Measures

According to [Toyota Motor Manufacturing Canada Inc.](#), Canada’s consumer incentives for the purchase of zero-emission vehicles should be “in line” with the IRA’s incentives. Similarly, the [Canadian Vehicle Manufacturers’ Association](#) called for “stronger” consumer incentives across Canada, noting that Ontario—Canada’s “largest auto market”—does not provide such incentives. [Global Automakers of Canada](#) encouraged a doubling of existing incentives to match U.S. incentives but “without imposing the restrictions” contained in the IRA. Moreover, [Unifor](#) and the [Canadian Vehicle Manufacturers’ Association](#) supported a \$10,000 consumer incentive, suggesting that this amount would be equivalent to the total of US\$7,500 in tax credits available in the United States. For consistency with the IRA, the [Canadian Vehicle Manufacturers’ Association](#) also proposed a consumer incentive for the purchase of used zero-emission vehicles and for home charging infrastructure.

The [Canadian Vehicle Manufacturers’ Association](#) identified two reasons why Canada would benefit from a “comprehensive plan” to increase the domestic use of electric vehicles: to respond to the IRA; and to remain competitive in the “transformation to electrification.” Moreover, the [Canadian Vehicle Manufacturers’ Association](#) contended that, considering the United States’ new approach to industrial policy that is contained in the IRA, the Government of Canada should “go further than a strategy” concerning automotive vehicles and the transition to electric vehicles.

Regarding batteries for zero-emission vehicles, [Global Automakers of Canada](#) stated that the Advanced Manufacturing Production Credit contained in Section 45X of the IRA provides a “large subsidy” totalling between \$3,600 and \$6,300 per battery, and stressed that the Government of Canada “urgently needs to match or exceed” this U.S. subsidy. [Electric Mobility Canada](#) mentioned that this credit gives a firm that is manufacturing batteries for zero-emission vehicles “\$45 per kilowatt hour for every battery over seven

kilowatt hours,” which “represents [an estimated] one-third of the total cost of manufacturing an automotive battery.” As well, [Electric Mobility Canada](#) suggested that Canada would benefit if Section 45X of the IRA were amended so that the Advanced Manufacturing Production Credit applies to all such batteries manufactured in North America, rather than only in the United States. Additionally, the [Canadian Vehicle Manufacturers' Association](#) maintained that the Government should provide Canadian firms that manufacture battery cells and modules for electric vehicles with measures that are comparable to the IRA's production tax credits for battery modules, cells and electrode-active materials.

With a focus on the critical minerals that are a key component of batteries for zero-emission vehicles, the [Canadian Vehicle Manufacturers' Association](#) urged the Government of Canada to increase funding for critical mineral production, and to ensure that funding “is accessible.” The Canadian Global Affairs Institute's [Colin Robertson](#) called on the Government to take two actions: consider Canada's “natural advantage” in critical minerals when developing a national industrial strategy; and ensure that critical minerals are refined domestically to benefit from the “technology and the jobs that could be created” from adding value within Canada.

Discussing mines, the [Canadian Chamber of Commerce](#) observed that the IRA presents challenges for Canadian firms, and emphasized the need to facilitate the mining of natural resources in Canada. The [Canadian Chamber of Commerce](#) also said that the Government of Canada can “reduce mining project lead times” through collaborating with a “broad spectrum of stakeholders.” As well, [Clean Energy Canada](#) contended that it is “exceedingly difficult” to obtain federal and provincial approvals for projects, and underlined that changes are needed so that it takes fewer than 10 years to develop a mine.

F. Employee-Related Measures

The [Canadian Labour Congress](#) argued that the Government of Canada should support the country's employees through both providing more training about how to perform jobs in a low-carbon economy and ensuring that “apprenticeship requirements [for such jobs]” are at least as “aggressive” as those in the IRA. As well, the [Canadian Labour Congress](#) suggested that the proposed Build Back Better Act would have been “harmful” to Canadian automotive employees, whereas the IRA is “inclusive.” Furthermore, according to the Canadian Labour Congress, labour standards should be aligned between Canada and the United States.



Because the IRA provides firms with incentives to create “union jobs” and to hire apprentices, [Canada's Building Trades Unions](#) urged the Government of Canada to respond to the statute by continuing to support the recruitment and training of skilled workers. In the opinion of the [Canadian Labour Congress](#), considering the “magnitude” of the IRA, the Government should be “strategic” in its response to the statute because the country “cannot match, dollar for dollar,” the support that the IRA and other U.S. measures provide to firms. Therefore, the Canadian Labour Congress proposed that Canada should “really invest” in employees in order to ensure “good” employment opportunities in Canada.

G. Advocacy, Consultation and Collaboration

Focusing on advocacy efforts in relation to the IRA and the proposed Build Back Better Act, and recognizing that parts of the latter have been incorporated into the former, [Canadian Manufacturers & Exporters](#) described cooperation between the Government of Canada and the country’s private sector concerning the proposed Build Back Better Act as “successful,” and supported an ongoing Team Canada approach in responding to the IRA. According to the Canadian Global Affairs Institute’s [Colin Robertson](#), such an approach should involve all levels of government, firms, organized labour groups and advocacy organizations. Regarding the IRA, [Toyota Motor Manufacturing Canada Inc.](#) pointed out that the Government of Canada should work with countries that have similar concerns to ensure that firms are not “penalized” if they choose to build vehicles and their batteries in Canada.

[Canadian Manufacturers & Exporters](#) proposed that the Government of Canada should increase its diplomatic efforts in the United States to “tamp down” approaches focused on “Buy American” and to promote those reflecting “Buy North American.” Moreover, the Canadian Global Affairs Institute’s [Colin Robertson](#) remarked that Canadian legislators should meet regularly with their U.S. counterparts to discuss the importance of close economic and trade relations between Canada and the United States, and the need to expand the scope of “Buy America” policies to include Canada and Mexico, with the result that such policies would become “Buy North America” policies.

With a general emphasis on recent Canadian advocacy efforts in the United States, including with respect to the proposed Build Back Better Act, the [Canadian Steel Producers Association](#) commented that Canada has “done a very good job” of “banding together across party lines to create a united front” on issues that are important to the country. The [Canadian Steel Producers Association](#) also highlighted the need to continue to remind the United States that the country has “no better partner” than Canada. According to the [Canadian Vehicle Manufacturers’ Association](#), as the United States tries

to “onshore more of [its] manufacturing and things like critical minerals and [recognizing the *Creating Helpful Incentives to Produce Semiconductors and Science Act of 2022*],” Canada should demonstrate that it is a “trusted, secure supplier.” Moreover, the Canadian Global Affairs Institute’s [Colin Robertson](#) mentioned that the United States should be reminded daily about the benefits of the country’s relationship with Canada.

Concerning consultation and collaboration, the [Canadian Labour Congress](#) stated that Canada would benefit from “very strong” involvement by organized labour representatives in discussions about a “comprehensive strategic framework” that incorporates “commitments and actions” announced in 2022 in the federal budget and the economic statement. The [Canadian Agri-Food Trade Alliance](#) remarked that Canada needs to have the right policies to respond to the IRA, and maintained that its members want “more industry-government collaboration—to prevent issues from becoming problems.”

Finally, [Canadian Manufacturers & Exporters](#) underlined that a partnership between the Government of Canada and the country’s private sector could address challenges facing firms, such as labour shortages, supply chain disruptions, and any reduction in Canadian manufacturing that might occur because of the IRA and other U.S. legislation.

THE COMMITTEE’S THOUGHTS AND RECOMMENDATIONS

In 2021, the combined value of Canada–U.S. merchandise trade and services trade exceeded \$1 trillion. The countries have one of the world’s largest bilateral trading relationships, as well as strong cooperation in such areas as defence, security and the natural environment. Family ties and friendships also exist across their shared borders. The Committee recognizes that this critically important trading relationship can be negatively affected by a number of factors, and remembers—for example—the supply chain disruptions resulting from the blockades at certain ports of entry along the two countries’ shared border in 2022. As well, legislation, policies and measures in either country can affect people, firms and communities in the other country. Although some impacts are intended, there can also be unintended consequences. The United States’ *Inflation Reduction Act of 2022*, which addresses a range of public policy areas, is one example of such legislation.

Given the breadth and depth of the Canada–U.S. relationship, it is not surprising that the *Inflation Reduction Act of 2022* is having impacts on Canada’s firms and employees, who—if negatively affected—would likely welcome supportive federal actions. The Committee acknowledges that national strategies can be helpful in guiding a country’s efforts to achieve certain objectives, perhaps particularly so during significant



transitions. In Canada’s current context, as the country remains committed to increasing its use of clean energy, continues to focus on ensuring both growth and domestic production of essential goods in a post-pandemic world, and considers the future for Canada’s manufacturing and other sectors, a national industrial strategy—with actions that are specific, measurable and timely—could be beneficial. Because of its myriad implications for the country, such a strategy should be developed following consultations with—and in collaboration with—all relevant stakeholders.

Most governments worldwide provide various kinds of support, whether through program spending or tax expenditures, not only generally but also specifically during crises and major economic transformations. In certain cases, the amount of support available is not sufficient to meet all needs. At times, the application process for requesting support through government programs can be cumbersome, especially when compared to tax measures. On occasion, the program or tax support is not provided in a timely manner. For some, program spending may be the best method for distributing support; for others, the tax system is preferred. The Committee notes that program and tax support will be most effective when it is adequate in the context of the need, when any required application process can be completed quickly and easily, and when the support is delivered as expeditiously as possible. With adequate and timely support, people receive assistance when it is needed the most, firms are better able to make investment and other decisions, and communities have the infrastructure and other resources that contribute positively to their residents’ quality of life and to their firms’ ability to operate efficiently.

Finally, like governments in some other countries, the Government of Canada—alone and with relevant stakeholders, as required and appropriate—promotes and protects the country’s economic interests. In the immediate context of the United States’ *Inflation Reduction Act of 2022*, but also more broadly, the Committee is convinced that advocacy efforts are instrumental in ensuring that the Government of the United States and other relevant U.S. stakeholders are aware of both the consequences of their country’s legislation, policies and measures for Canada, and the ways in which the United States could be negatively affected by those consequences. Recent Canadian advocacy efforts undertaken in the United States regarding the proposed Build Back Better Act is a successful example of such efforts. The Government of Canada should undertake advocacy efforts alongside—as required—other domestic governments, as well as business and labour representatives.

In light of the foregoing, the Committee recommends:

Recommendation 1

That the Government of Canada develop and implement a national industrial strategy that has specific, measurable and timely actions. Recognizing the need to consider the requirements and preferences of multiple domestic sectors, parts of this strategy should focus on the following three priorities: Canada's ongoing transition to clean technologies and energy sources, as well as achievement of net-zero greenhouse gas emissions by 2050; the domestic manufacturing of certain essential goods; and the ongoing competitiveness of Canada's sectors and the country's ability to attract new investments. In developing and implementing the strategy, the Government should consult with relevant stakeholders, including other governments in Canada, as well as representatives of business trade associations and organized labour groups.

Recommendation 2

That the Government of Canada consider creating a special manufacturing blue ribbon panel that would include representatives from the private sector and organized labour groups. Among its goals, the panel should work to ensure that future federal support programs designed to meet the evolving needs of Canadian firms are made available expeditiously, and that—with a view to high levels of participation—such firms are made aware of new measures. As well, when creating future federal tax credits and subsidies for the private sector, attention should be paid to implementing measures that would support the ability of Canada's firms to compete with their United States counterparts following the enactment of the United States' *Inflation Reduction Act of 2022*.

Recommendation 3

That the Government of Canada ensure that federal support measures provided to people, firms and communities—whether in the form of program spending or tax expenditures—are developed with due consideration given to adequacy, accessibility and timely delivery. As well, measures announced in federal budgets and economic statements should be as detailed as possible concerning eligibility requirements and any required application process.



Recommendation 4

That the Government of Canada—alone and in collaboration with other relevant stakeholders, as appropriate—continue with and enhance its advocacy efforts in the United States regarding that country’s legislation, policies and measures that could have intended and unintended consequences for Canada. Advocacy concerning the United States’ *Inflation Reduction Act of 2022* should continue to be part of those efforts.

Recommendation 5

That the Government of Canada consider designing and implementing federal policies to ensure that goods the Government procures have been produced using low-carbon emitting technologies.

Recommendation 6

That the Government of Canada undertake advocacy efforts with the Government of the United States with the goal of ensuring that all batteries for zero-emission vehicles that are manufactured in North America are eligible for the Advanced Manufacturing Production Credit provided under Section 45X of the United States’ *Inflation Reduction Act of 2022*.

Recommendation 7

That the Government of Canada provide incentives for Canadian production of low-cost green hydrogen by expanding the scope of two measures proposed in the 2022 federal fall economic statement: the investment tax credit for clean hydrogen; and the Clean Growth Fund. In particular, their scope should be expanded to include operational costs for the first three years of an eligible firm’s operations. As well, the details of the proposed investment tax credit for clean hydrogen should be made clear, partly with the goal of ensuring that investors clearly understand the implications for eligible firms.

Recommendation 8

That the Government of Canada ensure that new infrastructure that has been constructed—wholly or in part—with federal funding does not contain high-carbon construction materials, particularly imported aluminum or steel produced in emissions-intensive sectors. As well, the Government of Canada should implement relevant measures—including rules, tools and compliance systems—to ensure that imports of such materials are not used in the manufacturing of any equipment or machinery that is eligible for federal tax credits created in response to similar measures contained in the *United States' Inflation Reduction Act of 2022*.

APPENDIX A—PROVISIONS IN THE UNITED STATES' *INFLATION REDUCTION ACT OF 2022* CONCERNING CLEAN ENERGY AND CLEAN TECHNOLOGIES

In December 2022, the Biden administration released a [guidebook](#) on the U.S. *Inflation Reduction Act of 2022*'s clean energy and climate-related measures, entitled “Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act’s Investments in Clean Energy and Climate Action.” Tables 1 through 9 provide a brief overview of more than 40 measures relating to clean energy and clean technologies that are included in that guidebook’s chapter entitled “Advancing and Deploying American-Made Clean Energy Technologies.”

Table 1—Clean Energy and Clean Technologies Measures

Measure	Brief Description	Period of Availability	Appropriation Amount (US\$)
Clean Electricity Investment Tax Credit	Creates an investment tax credit for investments in U.S. facilities that produce clean electricity.	Available to certain facilities that are operational after 31 December 2024. The measure is expected to begin to be phased out in 2032.	N.A.
Clean Electricity Production Tax Credit	Creates a production tax credit for eligible U.S. facilities that produce clean electricity.	Available to eligible facilities that are operational after 31 December 2024. The measure is expected to begin to be phased out in 2032.	N.A.
Cost Recovery for Qualified Facilities, Qualified Property, and Energy Storage Technology	Cost recovery for eligible U.S. facilities that qualify for the Clean Electricity Investment Tax Credit or the Clean Electricity Production Tax Credit.	Available to eligible facilities that are operational after 31 December 2024. The measure is expected to begin to be phased out in 2032.	N.A.
Funding for U.S. Department of Energy Loan Programs Office	Provides funding to the U.S. Department of Energy’s Loan Programs Office to cover the costs of granting loans to U.S. energy projects that are eligible for a loan under Section 1703 of the U.S. <i>Energy Policy Act of 2005</i> .	Available through 30 September 2026.	\$3.6 billion
Greenhouse Gas Reduction Fund	Creates grants to facilitate investments in certain U.S. clean energy and climate projects, including in low-income communities.	Available from 15 February 2023 until 30 September 2024.	\$27.0 billion

Measure	Brief Description	Period of Availability	Appropriation Amount (US\$)
Increase in Energy Credit for Solar and Wind Facilities Placed in Service in Connection with Low-Income Communities	Creates an additional investment tax credit for certain small-scale wind and solar facilities located in low-income communities across the United States.	Available from 2023 until 2025.	N.A.
Investment Tax Credit for Energy Property	Extends and modifies an existing investment tax credit for investments in certain U.S. clean energy projects, including fuel cell, solar and geothermal.	Available for renewable energy projects that begin construction prior to 1 January 2025.	N.A.
Production Tax Credit for Electricity from Renewables	Extends and modifies an existing production tax credit for producing electricity from certain renewable energy sources, such as wind, geothermal and solar.	Available for renewable energy projects that begin construction prior to 1 January 2025.	N.A.
Tribal Energy Loan Guarantee Program	Increases the lending authority of the Tribal Energy Loan Guarantee Program from US\$2.0 billion to US\$20.0 billion and appropriates US\$75.0 million for program-related activities.	Available through 30 September 2026.	\$75.0 million
Zero-Emission Nuclear Power Production Credit	Creates a tax credit for electricity produced at certain U.S. nuclear power facilities.	Available for electricity produced and sold after 31 December 2023 and before 31 December 2032.	N.A.

Notes: Dollar amounts are the total appropriation amount over the 2022 to 2031 period.

Numbers have been rounded.

“N.A.” refers to “not applicable.”

For more information about these measures, see the sources below.

Sources: United States, Congressional Research Service, [Inflation Reduction Act of 2022 \(IRA\): Provisions Related to Climate Change](#), 3 October 2022; and United States, The White House, [Building a Clean Economy: A Guidebook to the Inflation Reduction Act’s Investments in Clean Energy and Climate Action](#), Version 2, January 2023, pp. 9–81.

Table 2—Manufacturing Measures

Measure	Brief Description	Period of Availability	Appropriation Amount (US\$)
Advanced Energy Project Credit	Extends and modifies an existing tax credit for investments in eligible U.S. energy projects by allocating US\$10 billion, of which US\$4.0 billion will be directed to certain “energy” communities.	Not specified.	\$10.0 billion
Advanced Manufacturing Production Credit	Creates a production tax credit for U.S. manufacturing of battery components, critical minerals, inverter components, and solar and wind energy components.	Available between 2023 and 2029. The measure is expected to begin to be phased out over the 2030 to 2032 period.	N.A.
Availability of High-Assay Low-Enriched Uranium	Allocates additional funding to the High-Assay Low-Enriched Uranium Program to support, among other objectives, the establishment of a U.S. supply chain for high-assay low-enriched uranium.	Available through 30 September 2026.	\$700.0 million
Energy Infrastructure Reinvestment Financing	Creates a program that provides loans to certain U.S. energy-related infrastructure projects, including those that retool, repower, repurpose or replace energy infrastructure.	Available through 30 September 2026.	\$5.0 billion
U.S. <i>Defense Production Act</i>	Allocates additional funding to support ongoing U.S. efforts under the U.S. <i>Defense Production Act</i> to increase U.S. manufacturing of certain clean technologies.	Available through 30 September 2024.	\$250.0 million

Notes: Dollar amounts are the total appropriation amount over the 2022 to 2031 period.

Numbers have been rounded.

“N.A.” refers to “not applicable.”

For more information about these measures, see the sources below.

Sources: United States, Congressional Research Service, [Inflation Reduction Act of 2022 \(IRA\): Provisions Related to Climate Change](#), 3 October 2022; and United States, The White House, [Building a Clean Economy: A Guidebook to the Inflation Reduction Act’s Investments in Clean Energy and Climate Action](#), Version 2, January 2023, pp. 9–81.

Table 3—Electricity Transmission Measures

Measure	Brief Description	Period of Availability	Appropriation Amount (US\$)
Siting of Interstate Electricity Transmission Lines	Creates a program that provides grants to U.S. state and local governments for the siting of certain electricity transmission lines.	Available through 30 September 2029.	\$760.0 million
Interregional and Offshore Wind Electricity Transmission Planning, Modeling and Analysis	Allocates additional funding to the U.S. Department of Energy’s Grid Deployment Office to conduct planning, modeling and analysis of U.S. interregional and offshore wind transmission.	Available through 30 September 2031.	\$100.0 million
Transmission Facility Financing	Creates a program that provides loans for the construction of new, or the modification of existing U.S., electricity transmission facilities.	Available through 30 September 2030.	\$2.0 billion

Notes: Dollar amounts are the total appropriation amount over the 2022 to 2031 period.

Numbers have been rounded.

“N.A.” refers to “not applicable.”

For more information about these measures, see the sources below.

Source: United States, Congressional Research Service, [Inflation Reduction Act of 2022 \(IRA\): Provisions Related to Climate Change](#), 3 October 2022; and United States, The White House, [Building a Clean Economy: A Guidebook to the Inflation Reduction Act’s Investments in Clean Energy and Climate Action](#), Version 2, January 2023, pp. 9–81.

Table 4—Clean Energy Measures for Rural Communities and Tribal Lands

Measure	Brief Description	Period of Availability	Appropriation Amount (US\$)
Electric Loans for Renewable Energy	Allocates funding for the construction of certain clean energy facilities in the United States.	Available until 30 September 2031.	\$1.0 billion
Rural Energy for America Program (REAP)	Allocates additional funding to existing grants and loans available to eligible U.S. agricultural producers and rural firms for certain renewable energy projects.	Available until 30 September 2031.	\$1.7 billion
REAP – Underutilized Renewable Energy Technologies	Allocates additional funding to existing grants and loans available to eligible U.S. agricultural producers and rural firms for “underutilized” renewable energy technologies.	Available until 30 September 2031.	\$303.8 million
Tribal Electrification Program	Creates a program with funding aimed at increasing the number of Tribal homes in the United States that have zero-emission electricity systems.	Available through 30 September 2031.	\$150.0 million
U.S. Department of Agriculture Assistance for Rural Electric Cooperatives	Allocates funding to support efforts by U.S. rural electricity cooperatives to increase energy efficiency and to reduce greenhouse gas emissions, among other objectives.	Available until 30 September 2031.	\$9.7 billion

Notes: Dollar amounts are the total appropriation amount over the 2022 to 2031 period.

Numbers have been rounded.

For more information about these measures, see the sources below.

Sources: United States, Congressional Research Service, [Inflation Reduction Act of 2022 \(IRA\): Provisions Related to Climate Change](#), 3 October 2022; and United States, The White House, [Building a Clean Economy: A Guidebook to the Inflation Reduction Act’s Investments in Clean Energy and Climate Action](#), Version 2, January 2023, pp. 9–81.

Table 5—Clean Vehicle Measures

Measure	Brief Description	Period of Availability	Appropriation Amount (US\$)
Advanced Technology Vehicle Manufacturing Loan Program	Allocates funding to the U.S. Department of Energy’s Loan Programs Office to provide loans that support U.S. manufacturing of certain technologically advanced vehicles, including zero-emission vehicles, and their components.	Available through 30 September 2028.	\$3.0 billion
Alternative Fuel Vehicle Refueling Property Credit	Extends and modifies existing tax credits for eligible fuel refueling or electrical charging property in U.S. low-income and rural communities. The credit limits are US\$1,000 per eligible property for individual consumers and US\$100,000 for firms.	Available between 1 January 2023 and 31 December 2032.	N.A.
Clean Vehicle Credit	Extends and modifies existing tax credits for the purchase of new zero-emission vehicles in the United States. The purchaser of such vehicles will qualify for the following: <ul style="list-style-type: none"> • a credit of US\$3,750 for a vehicle containing an electric battery having a specified percentage of the total value of its critical minerals either: extracted or processed in the United States or in a jurisdiction that is a U.S. free trade agreement partner; or recycled in North America; and/or • a credit of US\$3,750 for a vehicle containing an electric battery having certain parts that comprise a specified percentage of North American content. 	Available for vehicles purchased between 2023 and 2032.	N.A.
Credit for Previously Owned Clean Vehicles	Creates a tax credit equal to 30% of the U.S. sale price of a used zero-emission vehicle having a value of up to US\$25,000, with a maximum credit value of US\$4,000. The credit can be claimed by a taxpayer whose income, in the year of purchase, is below US\$150,000 for a joint filer or below US\$75,000 for a single filer.	Available for vehicles purchased between 2023 and 2032.	N.A.

Measure	Brief Description	Period of Availability	Appropriation Amount (US\$)
Credit for Qualified Commercial Clean Vehicles	Creates a tax credit equal to 15% of the incremental cost of a qualified commercial zero-emission vehicle purchased in the United States (30% if the vehicle does not have a gas- or diesel-powered internal combustion engine), with the incremental cost calculated relative to the cost of a solely gas- or diesel-powered vehicle. The maximum value of the credits for light-duty commercial zero-emission vehicles and heavy-duty commercial are US\$7,500 and US\$40,000, respectively.	Available for vehicles purchased between 2023 and 2032.	N.A.
Domestic Manufacturing Conversion Grants	Creates grants for U.S. production of certain zero-emission vehicles, including plug-in electric vehicles and fuel cell electric vehicles.	Available through 30 September 2031.	\$2.0 billion

Notes: Dollar amounts are the total appropriation amount over the 2022 to 2031 period.

Numbers have been rounded.

“N.A.” refers to “not applicable.”

For more information about these measures, see the sources below.

Sources: United States, Congressional Research Service, [Inflation Reduction Act of 2022 \(IRA\): Provisions Related to Climate Change](#), 3 October 2022; and United States, The White House, [Building a Clean Economy: A Guidebook to the Inflation Reduction Act’s Investments in Clean Energy and Climate Action](#), Version 2, January 2023, pp. 9–81.

Table 6—Clean Fuels Measures

Measure	Brief Description	Period of Availability	Appropriation Amount (US\$)
Biofuel Infrastructure and Agriculture Product Market Expansion (Higher Blend Infrastructure Incentive Program)	Allocates additional funding to the U.S. Department of Agriculture’s Higher Blend Infrastructure Incentive Program for grants to fueling facilities for certain clean fuels, including biodiesel and ethanol.	Available until 30 September 2031.	\$500.0 million
Clean Fuel Production Credit	Creates a tax credit for eligible U.S. producers of clean transportation fuels, including sustainable aviation fuels.	Available between 31 December 2024 and 31 December 2027.	N.A.
Second-Generation Biofuel Incentives	Extends existing tax credits for U.S. production of second-generation biofuels.	Available through 31 December 2024.	N.A.
Tax Credit for Alternative Fuels	Extends existing tax credits available for U.S. production of alternative fuels, including ethanol.	Available through 31 December 2024.	N.A.
Tax Credits for Biodiesel and Renewable Diesel	Extends existing tax credits available for U.S. production of biodiesel and renewable diesel. These credits include a tax credit of US\$1.00 per gallon produced of biodiesel, biodiesel mixtures and renewable diesel.	Available through 31 December 2024.	N.A.
Fueling Aviation’s Sustainable Transition – Technology	Allocates funding for new grants for projects relating to low-emission aviation technologies.	Available until 30 September 2026.	\$46.5 million

Measure	Brief Description	Period of Availability	Appropriation Amount (US\$)
Fueling Aviation's Sustainable Transition through Sustainable Aviation Fuels	Allocates funding for new grants for U.S. production, transportation, blending and storage of sustainable aviation fuel.	Available until 30 September 2026.	\$244.5 million
Section 211 of the U.S. <i>Clean Air Act</i>	Allocates new funding to the U.S. Environmental Protection Agency for implementation of the Renewable Fuel Standard Program, which includes conducting assessments of the impacts of fuels on public health and the natural environment.	Available until 30 September 2031	\$15.0 million
Sustainable Aviation Fuel Credit	Creates a tax credit for the use and sale of sustainable aviation fuel in the United States.	Available from 1 January 2023 to 31 December 2024.	N.A.

Notes: Dollar amounts are the total appropriation amount over the 2022 to 2031 period. Numbers have been rounded. "N.A." refers to "not applicable." For more information about these measures, see the sources below.

Sources: United States, Congressional Research Service, [*Inflation Reduction Act of 2022 \(IRA\): Provisions Related to Climate Change*](#), 3 October 2022; and United States, The White House, [*Building a Clean Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action*](#), Version 2, January 2023, pp. 9–81

Table 7—Decarbonization and Carbon Management Measures

Measure	Brief Description	Period of Availability	Appropriation Amount (US\$)
Advanced Industrial Facilities Deployment Program	Allocates funding to the U.S. Department of Energy to provide financial support to certain U.S. facilities involved in clean energy projects.	Available through 30 September 2026.	\$5.8 billion
Credit for Carbon Oxide Sequestration	Extends and modifies an existing production tax credit for eligible U.S. facilities involved in carbon dioxide sequestration.	Available to sequestration facilities that are operational before 1 January 2033.	N.A.
<i>American Innovation and Manufacturing Act</i>	Allocates new funding to the U.S. Environmental Protection Agency to implement the U.S. <i>American Innovation and Manufacturing Act</i> , which has objectives that include reducing hydrofluorocarbons emissions.	Available until 30 September 2026.	\$38.5 million
Methane Emissions Reduction Program	Creates a waste emissions charge applicable to certain U.S. natural gas and oil facilities; and provides financial and technical support to assist these facilities in reducing their methane and other greenhouse gas emissions.	Available until 30 September 2028.	\$1.6 billion

Notes: Dollar amounts are the total appropriation amount over the 2022 to 2031 period.

Numbers have been rounded.

“N.A.” refers to “not applicable.”

For more information about these measures, see the sources below.

Sources: United States, Congressional Research Service, [Inflation Reduction Act of 2022 \(IRA\): Provisions Related to Climate Change](#), 3 October 2022; and United States, The White House, [Building a Clean Economy: A Guidebook to the Inflation Reduction Act’s Investments in Clean Energy and Climate Action](#), Version 2, January 2023, pp. 9–81.

Table 8—Clean Hydrogen Measure

Measure	Brief Description	Period of Availability	Appropriation Amount (US\$)
Clean Hydrogen Production Tax Credit	Creates a production tax credit for U.S. production of clean hydrogen.	Available for clean hydrogen produced after 31 December 2022, and for certain clean hydrogen facilities that are operational before 1 January 2033.	N.A.

Notes: “N.A.” refers to “not applicable.”

For more information about this, see the sources below.

Sources: United States, Congressional Research Service, [*Inflation Reduction Act of 2022 \(IRA\): Provisions Related to Climate Change*](#), 3 October 2022; and United States, The White House, [*Building a Clean Economy: A Guidebook to the Inflation Reduction Act’s Investments in Clean Energy and Climate Action*](#), Version 2, January 2023, pp. 9–81

Table 9—Measures Relating to the Modernization of U.S. Department of Energy National Laboratories

Measure	Brief Description	Period of Availability	Appropriation Amount (US\$)
Idaho National Laboratory Infrastructure Investments	Provides funding to the U.S. Department of Energy to support the modernization and maintenance of the Idaho National Laboratory.	Available through 30 September 2027.	\$150.0 million
National Laboratory Infrastructure—Office of Energy Efficiency and Renewable Energy	Provides funding to the U.S. Department of Energy to support the modernization and maintenance of the National Renewable Energy Laboratory.	Available through 30 September 2027.	\$150.0 million
National Laboratory Infrastructure—Office of Fossil Energy and Carbon Management	Provides funding to the U.S. Department of Energy to support the modernization and maintenance of the National Energy Technology Laboratory.	Available through 30 September 2027.	\$150.0 million
National Laboratory Infrastructure—Office of Science	Provides funding to the U.S. Department of Energy to support the modernization and maintenance of scientific facilities in its national laboratories.	Available through 30 September 2027.	\$1.6 billion

Notes: Dollar amounts are the total appropriation amount over the 2022 to 2031 period.

Numbers have been rounded.

For more information about these measures, see the sources below.

Sources: United States, Congressional Research Service, [*Inflation Reduction Act of 2022 \(IRA\): Provisions Related to Climate Change*](#), 3 October 2022; and United States, The White House, [*Building a Clean Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action*](#), Version 2, January 2023, pp. 9–81.

APPENDIX B—CLIMATE AND ENERGY MEASURES ANNOUNCED IN THE GOVERNMENT OF CANADA’S 2022 FALL ECONOMIC STATEMENT

According to the Government of Canada, the 2022 fall [economic statement](#) (hereafter, the economic statement) includes “a clear commitment to ensuring Canada’s global competitiveness” in light of the United States’ *Inflation Reduction Act of 2022* (IRA). This commitment is realized by “investing further in a net-zero economy.” The economic statement also recognizes that the IRA will “undoubtedly accelerate the ongoing transition to a net-zero North American economy,” and “offers enormous financial supports to firms that locate their production in the United States.” Table 1 provides an overview of some of the measures announced in Chapter 2, entitled “Jobs, Growth, and an Economy That Works for Everyone,” of the economic statement.

Table 1—Climate and Energy Measures Proposed in the Government of Canada’s 2022 Fall Economic Statement

Measure	Brief Description
Investment Tax Credit for Clean Technologies	Creates a 30% refundable investment tax credit for eligible capital investments in Canada regarding the development and production of certain clean technologies.
Investment Tax Credit for Clean Hydrogen	Creates a refundable investment tax credit for eligible investments in Canada regarding the production of clean hydrogen. The credit rate of a maximum of 40% is based on carbon intensity.
Canada Growth Fund	Among other goals, the Canada Growth Fund aims to attract new private-sector investments designed to reduce the level of greenhouse gas emissions in Canada.
Sustainable Jobs Secretariat	Among other responsibilities, the Sustainable Jobs Secretariat coordinates the implementation of certain federal measures concerning sustainable jobs.
Sustainable Jobs Training Centre	Among other objectives, the Sustainable Jobs Training Centre aims to provide about 15,000 employees with on-site training opportunities to develop new skills suitable for a low-carbon economy.

Measure	Brief Description
Union Training and Innovation Program's Sustainable Jobs Stream	Among other goals, the Union Training and Innovation Program's Sustainable Jobs Stream will support labour unions "in leading the development of green skills training for workers in the trades."

Note: For more information about these measures, see the source below.

Source: Government of Canada, [Fall Economic Statement 2022](#).

APPENDIX C LIST OF WITNESSES

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
Automotive Parts Manufacturers' Association Flavio Volpe, President	2022/11/01	34
Canadian Manufacturers and Exporters Matt Poirier, Senior Director, Policy and Government Relations	2022/11/01	34
Canadian Steel Producers Association Catherine Cobden, President and Chief Executive Officer Daniel Kelter, Director, Trade and Industry Affairs	2022/11/01	34
Canadian Vehicle Manufacturers' Association Brian Kingston, President and Chief Executive Officer	2022/11/01	34
Toyota Motor Manufacturing Canada Inc. Scott MacKenzie, Director, Corporate and External Affairs	2022/11/01	34
Unifor Angelo DiCaro, Director, Research Department	2022/11/01	34
Aluminium Association of Canada Jean Simard, President and Chief Executive Officer	2022/11/15	36
Canada's Building Trades Unions Sean Strickland, Executive Director	2022/11/15	36
Canadian Chamber of Commerce David Billedeau, Senior Director, Natural Resources, Environment and Sustainability	2022/11/15	36
Electric Mobility Canada Daniel Breton, President and Chief Executive Officer	2022/11/15	36

Organizations and Individuals	Date	Meeting
Global Automakers of Canada David Adams, President and Chief Executive Officer	2022/11/15	36
Business Council of Canada Trevor Kennedy, Vice-President, Trade and International Policy	2022/11/18	37
Carbon Infrastructure Partners Corp. Craig Golinowski, President and Managing Partner	2022/11/18	37
Explorers and Producers Association of Canada Chris Montgomery, Vice-President, Policy	2022/11/18	37
Parkland Corporation Ryan Krogmeier, Senior Vice-President, Supply, Trading and Refining	2022/11/18	37
United Steelworkers Union Meg Gingrich, Assistant to the National Director	2022/11/18	37
As an individual Geneviève Dufour, Professor, Université de Sherbrooke	2022/11/22	38
Canadian Hydrogen and Fuel Cell Association Ivette Vera-Perez, President and Chief Executive Officer	2022/11/22	38
Chemistry Industry Association of Canada Bob Masterson, President and Chief Executive Officer	2022/11/22	38
Smart Prosperity Institute Derek Eaton, Senior Director, Public Policy Research and Outreach	2022/11/22	38
Canadian Labour Congress Elizabeth Kwan, Senior Researcher	2022/11/25	39
Canadian Nuclear Association John Gorman, President and Chief Executive Officer	2022/11/25	39
Clean Energy Canada Mark Zacharias, Executive Director	2022/11/25	39
World Energy GH2 John Risley, Director	2022/11/25	39

Organizations and Individuals	Date	Meeting
Canadian Agri-Food Trade Alliance Claire Citeau, Executive Director	2022/11/29	40
Canadian Association of Energy Contractors Mark A. Scholz, President and Chief Executive Officer	2022/11/29	40
Canadian Renewable Energy Association Evan Wilson, Senior Director, Policy, Regulatory and Government Affairs	2022/11/29	40
Electricity Canada Francis Bradley, President and Chief Executive Officer	2022/11/29	40
Renewable Industries Canada Don O'Connor, Advisor	2022/11/29	40
As an individual Colin Robertson, Senior Advisor and Fellow, Canadian Global Affairs Institute	2022/12/13	44
Bioindustrial Innovation Canada A. J. (Sandy) Marshall, Advisor and Project Manager	2022/12/13	44
Canadian Biogas Association Jennifer Green, Executive Director	2022/12/13	44
Cement Association of Canada Adam Auer, President and Chief Executive Officer	2022/12/13	44

APPENDIX D LIST OF BRIEFS

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 Fuels Association

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. [34](#), [36](#), [37](#), [38](#), [39](#), [40](#), [44](#), [51](#), [57](#), [59](#) and [62](#)) is tabled.

Respectfully submitted,

Hon. Judy A. Sgro
Chair

