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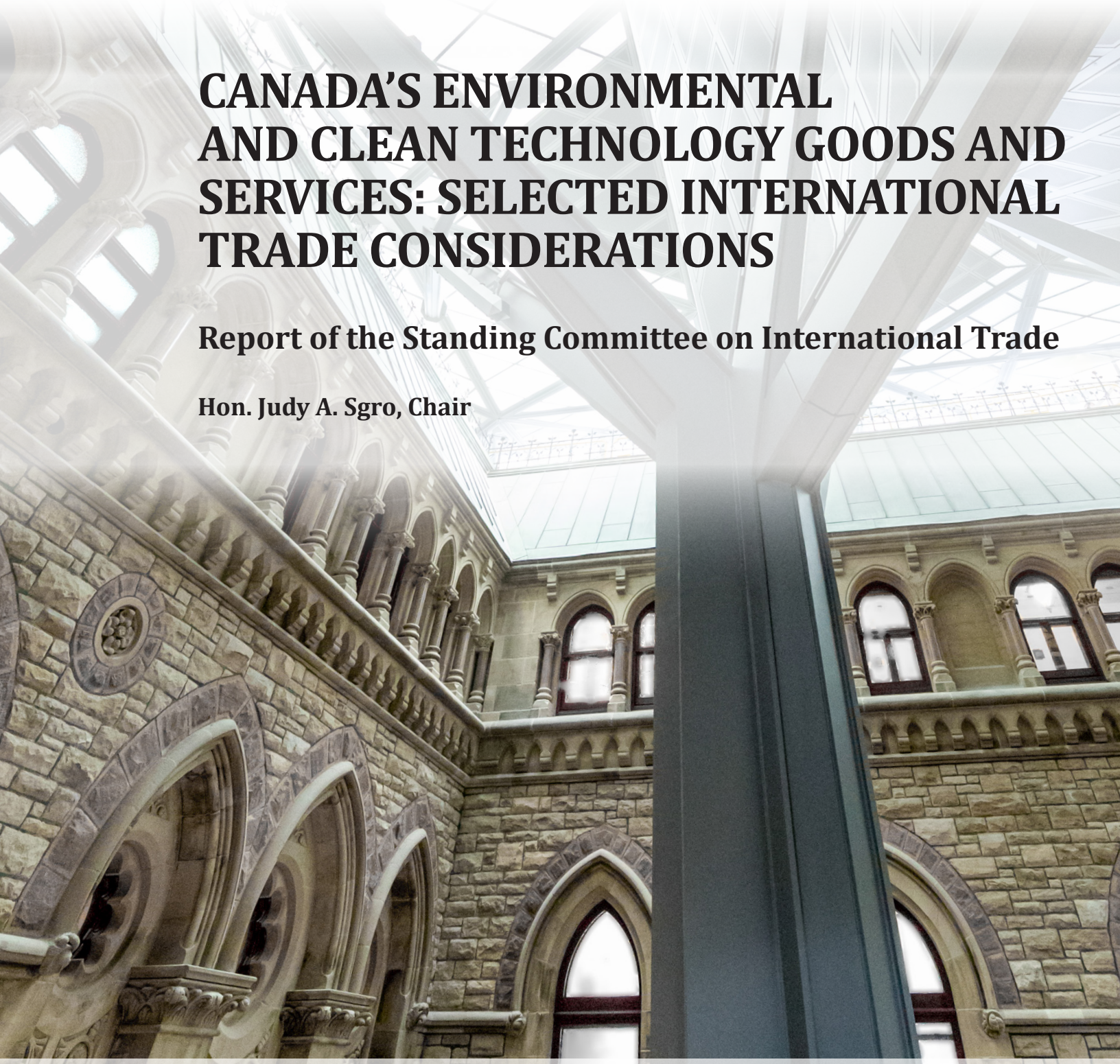

CANADA'S ENVIRONMENTAL AND CLEAN TECHNOLOGY GOODS AND SERVICES: SELECTED INTERNATIONAL TRADE CONSIDERATIONS

Report of the Standing Committee on International Trade

Hon. Judy A. Sgro, Chair

NOVEMBER 2022
44th PARLIAMENT, 1st SESSION

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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.

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THE STANDING COMMITTEE ON INTERNATIONAL TRADE

has the honour to present its

THIRD REPORT

Pursuant to its mandate under Standing Order 108(2), the committee has studied Canada's exports of environmental and clean technology goods and services and has agreed to report the following:

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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.

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CANADA'S ENVIRONMENTAL AND CLEAN TECHNOLOGY GOODS AND SERVICES: SELECTED INTERNATIONAL TRADE CONSIDERATIONS

INTRODUCTION

Canada's environmental and clean technology (ECT) sector is a significant contributor to the country's gross domestic product (GDP). According to Statistics Canada's *The Daily* for 6 January 2022, the sector was valued at $67.5 billion in 2020 and accounted for 3.3% of Canada's GDP. In that year, the value of Canada's exports and imports of ECT goods and services totalled $14.3 billion and $20.5 billion, respectively, representing 2.2% of the country's exports and 3.0% of its imports. In 2020, Canada's ECT exports and imports comprised mostly clean technology goods.

With exports valued at $9.9 billion in 2019, the United States was Canada's primary export partner for ECT goods and services, followed by the United Kingdom, at $498.8 million. As with exports, the United States was Canada's main import partner for ECT goods and services in that year, with imports valued at $13.9 billion. In 2019, China was Canada's second-largest source of such imports, at $1.1 billion.

On 12 March 2021, the House of Commons Standing Committee on International Trade (the Committee) adopted a motion to undertake a study on Canada's exports of "green, clean and low-carbon technologies," including an examination of the impact of such clean technologies as "hydroelectricity, wind energy, solar energy, nuclear energy, carbon sequestration, grid management, batteries and plastics recycling" on international markets.

During four meetings on this study held from 3 to 14 May 2021 and a fifth meeting on 21 March 2022, the Committee's witnesses comprised officials from four federal departments and two federal Crown corporations, as well as representatives from: eight firms; five sector-specific business trade associations; and one organized labour group. The Committee also received one brief.

The report's first section provides the witnesses' views about opportunities in certain international markets for exports of specific Canadian ECT goods and services. The second section outlines their observations about some existing and desired federal supports that affect the international competitiveness of Canada's ECT exporters and their goods and services. Finally, the report concludes with the Committee's thoughts and recommendations.

Because the focus of this report is exports of Canadian ECT goods and services, some witness statements not directly related to the Committee's motion are not summarized. These include their views about: the Strategic Innovation Fund; human rights; accelerated capital cost allowance rates; tax credits for manufacturers, mineral exploration and investment; science, technology and innovation treaties; and labour issues relating to the country's ECT sector.

OPPORTUNITIES: CERTAIN INTERNATIONAL MARKETS, SPECIFIC GOODS AND SERVICES

The Committee's witnesses discussed certain international market opportunities for exports of specific Canadian ECT goods and services. In addition to making general comments, they focused on particular countries, regions and continents: the United States, Europe, the Asia-Pacific region, the Caribbean, Latin America and Africa. Regarding specific Canadian ECT goods and services, they made comments about: electricity and associated equipment; liquefied natural gas; critical minerals, electric vehicles and associated technologies; nuclear technologies; and forest products.

General

Mentioning international opportunities for exports of Canadian ECT goods and services, Natural Resources Canada officials stressed that "the potential is huge," with—for example—the value of the international market for low-carbon technologies expected to exceed $34 trillion by 2030. Moreover, Innovation, Science and Economic Development Canada officials maintained that Canada has all of the "strategic minerals" needed for the "types of battery production" that could occur in the future.

The International Brotherhood of Electrical Workers highlighted opportunities for Canadian exports of "green, clean and low-carbon technologies" to international markets. According to Foresight Cleantech Accelerator Centre, several of Canada's ECT firms—such as Carbon Engineering Ltd. and Svante, both of which are headquartered in British Columbia, and Quebec's Enerkem—have undertaken projects or developed partnerships with firms in international markets.

Concerning export opportunities in the automotive sector, Ballard Power Systems Inc.—which is headquartered in British Columbia—commented that it exports hydrogen fuel cell technology to the United States, Europe and China. In Ballard Power Systems Inc.'s opinion, foreign demand for this technology is growing as a result of certain countries' commitments to reducing greenhouse gas emissions.

In a brief submitted to the Committee, WaterPower Canada underscored the "growing importance of Canadian hydroelectricity as a leading clean technology export" to international markets. In the International Brotherhood of Electrical Workers' view, technical expertise concerning clean electricity and investments in innovative projects have created export opportunities in two areas: exports of Canadian clean electricity to the United States; and exports of Canadian-manufactured equipment that generates electricity to the world.

Regarding export opportunities relating to nuclear technologies, the International Brotherhood of Electrical Workers remarked that Canada is a leader in developing the next generation of small modular reactors, which it characterized as a "huge" international market. It added that these reactors can be mass-produced domestically and exported internationally. Similarly, the Canadian Nuclear Association observed that Canada has a "first-mover advantage" concerning the production of small modular reactors because of the 2018 Canadian Small Modular Reactor (SMR) Roadmap for the "development and deployment" of such reactors. The Canadian Nuclear Association also indicated that the expected annual value of the global market for small modular reactors over the 2021 to 2040 period is between $150 billion and $300 billion.

United States

Electric Mobility Canada stated that Canada "has the strategic critical minerals that the United States wants." It mentioned that, as of 3 May 2021, 96% of the batteries used in electric vehicles were made in China, Japan and South Korea. Electric Mobility Canada suggested that, to reduce dependence on these countries for such batteries, Canada and the United States should strengthen their cooperation concerning supply chains involving critical minerals.

AddÉnergie Technologies Inc.—which is headquartered in Quebec—observed that, following U.S. President Joe Biden's announced plan to install 500,000 charging stations by 2030, there is "significantly more opportunity" for Canadian exports of equipment for charging electric vehicles to the United States.

Heliene, which is headquartered in Ontario, said that it wants to expand its production of solar modules in Ontario and in the United States, particularly in Florida and Minnesota.

The International Brotherhood of Electrical Workers pointed out that existing ECT investments in clean electricity production in Canada, including the construction and operation of a "commercial-sized carbon capture and storage technology in Saskatchewan at Boundary Dam 3," have created opportunities for exporting Canadian-produced clean electricity to the United States.

Recognizing the integration of the Canadian and U.S. electricity transmission systems, WaterPower Canada indicated that the United States experiences certain benefits—including "affordability, flexibility and dependability"—when importing clean electricity from Canada. WaterPower Canada also maintained that the recently completed Manitoba–Minnesota transmission project, the clean electricity initiative under development between Québec and Maine, and the proposed Champlain Hudson Power Express transmission line linking Montreal to New York City have the potential to increase Canadian hydroelectricity exports to the United States.

Regarding the integrated supply chain that facilitates Canadian exports of wood products to the United States, the Forest Products Association of Canada mentioned that the Canada-United States Greening Government Initiative encourages the use of Canadian forest products for construction in the United States.

Focusing on innovation in Canada's forestry sector, the Forest Products Association of Canada underscored the development of low-carbon bioproducts for export, particularly to the United States. The Forest Products Association of Canada also discussed the potential for exporting Canadian biocrude oil produced from wood and biomass to the United States and other international markets.

Commenting on U.S. measures that could affect Canadian ECT exports to the United States, AddÉnergie Technologies Inc. described the "likely implementation of [B]uy America" policies as "a major challenge" that would limit access by Canada's ECT firms to the U.S. procurement market. Ballard Power Systems Inc. contended that, because the supply chain for hydrogen fuel cells is integrated between Canada and the United States, "Buy America" policies would "challenge" its cost-reduction efforts. It suggested that such policies would hamper the ability to manufacture at scale, and—in the long run—would make Canada's ECT exporters less competitive in the U.S. market.

Concerning another U.S. measure, Heliene asserted that the 7 February 2018 inclusion of certain Canadian solar products within the United States' four-year global safeguard measures was "of greatest consternation and [had] adverse financial impacts [on]

Heliene and [the] Canadian clean-tech" sector. According to Heliene, the measure imposed an ad valorem tariff at the rate of 30% on U.S. imports of those products, although—by May 2021—a U.S. presidential proclamation had reduced the rate to 18%.

Europe

First Cobalt Corp.—which is headquartered in Ontario—identified the European Union as an important international market for electric vehicles and their parts, as well as critical minerals. As well, First Cobalt Corp. observed that Canada has access to "vast" mineral deposits that the "Europeans don't have" and that are required to produce batteries and other electric vehicle components.

The Canadian Nuclear Association stressed that the "demand for clean energy is driving [nuclear] technology to new frontiers," and is providing Canadian firms with more opportunities to export CANDU—Canada Deuterium Uranium—reactors. In particular, the Canadian Nuclear Association argued that there are opportunities for Canada to export CANDU reactors to Europe, specifically to Romania.

Asia-Pacific Region

Global Affairs Canada officials characterized southeast Asia as a "high-potential" region for trade in Canadian ECT goods and services, "particularly with some of the emerging markets." Pyrowave—which is headquartered in Quebec—commented on its efforts to develop several plastic waste recycling projects in Asia, and added that there is a "world-wide demand" for such goods and services from Canada.

LNG Canada, which is headquartered in British Columbia, noted the construction of its liquefied natural gas and export facility in Kitimat, British Columbia, which is expected to begin to supply international markets by 2025. According to LNG Canada, abundant natural gas reserves and the geographic proximity of seaports in British Columbia's northern region to Asian countries provide Canada with opportunities to increase its liquefied natural gas exports. In its opinion, Asian countries will be the most significant source of increased future demand for liquefied natural gas, with Canada and other jurisdictions expected to supply "60% of China's demand for imported natural gas" by 2040.

Similarly, the Canadian Association of Petroleum Producers pointed out that the shipping distance from British Columbia's northern region to the "major markets" of China, India, Japan and Taiwan provide Canadian producers of liquefied natural gas with certain

advantages. In its view, because of proximity to Asia, liquefied natural gas from Canada is a "lower-carbon product" when compared to other countries.

Speaking about opportunities in India, Innovation, Science and Economic Development Canada officials mentioned that they and Global Affairs Canada's Trade Commissioner Service have worked closely with Canadian firms that develop and produce waste-water treatment technologies to help them promote these technologies in that country. Moreover, Ballard Power Systems Inc. emphasized the need to understand the potential applicability of its hydrogen fuel cells technology in India and how to secure the best partners in that country in order to "access the market and also to scale up."

Carbon Upcycling Technologies—which is headquartered in Alberta—stated that it is "at a very late stage" of concluding agreements with firms in Asia, as well as in the United States and Europe, for the licensing of carbon capture technologies. Carbon Upcycling Technologies explained that, while other countries' carbon emissions cannot be captured in Canada, Carbon Upcycling Technologies' technical knowledge can be exported and used locally, creating "long-term business relationships" as a result. Moreover, specifically mentioning China, India and Indonesia, Carbon Upcycling Technologies advocated the creation of a framework to promote the adoption of Canadian-developed carbon capture technologies.

Opus One Solutions, which is headquartered in Ontario, indicated that its main export markets are Japan and Australia, with the latter being a particularly "huge market" for exports of certain Canadian ECT goods and services. However, concerning Canadian exports of liquefied natural gas, LNG Canada pointed out that—alongside Qatar—Australia is among Canada's "global competitors in the LNG business."

Other Regions

Acknowledging that most of Canada's ECT firms focus on the U.S. market, Heliene highlighted opportunities to increase Canadian exports of solar panels and solar cell technologies to the Caribbean, Latin America and sub-Saharan Africa. Heliene also remarked that, in the last decade, it has exported certain ECT goods to the Caribbean. As well, Heliene noted the assistance it received from the Trade Commissioner Service to access markets in Argentina, Brazil, Mexico and Ghana.

Opus One Solutions suggested that Canadian ECT goods and services should be exported to markets on the African continent, including South Africa. With a focus on Africa and other regions, the Canadian Nuclear Association asserted that there is a

"growing interest in key markets" for small nuclear reactors and other Canadian ECT exports.

FEDERAL SUPPORTS: EXISTING AND DESIRED

The Committee's witnesses identified a range of existing and desired federal supports that affect, or could affect, the international competitiveness of Canada's ECT firms that either export or wish to do so. In particular, they spoke about: the Trade Commissioner Service; start-up financing; the country's international trade agreements; non-tariff trade barriers; and other measures.

A. The Trade Commissioner Service

Discussing the assistance that Canada's Trade Commissioner Service provides to the country's ECT exporters, Global Affairs Canada officials drew attention to the network of more than 1,000 trade commissioners who work in more than 160 cities around the world to facilitate international sales, commercial partnerships and foreign investment. They added that more than 100 of these commissioners have responsibilities that include supporting efforts by Canada's ECT firms to enter, or expand in, international markets.

Global Affairs Canada officials also noted that the Trade Commissioner Service's CanExport programs have provided a total of $10 million to more than 260 clean-technology projects. As well, they stressed that assisting Canada's ECT firms to access international markets is a "key priority" that is supported by the country's International Business Development Strategy for Clean Technology. According to them, since 2017, this strategy has "helped generate more than $83 million in commercial successes by Canadian clean-tech firms, helping them to scale [up] internationally."

Natural Resources Canada officials underscored that collaborating with the Trade Commissioner Service enhances the federal support given to Canada's ECT exporters. As well, they commented that the Trade Commissioner Service is part of the federal Clean Growth Hub.

Ballard Power Systems Inc. said that, in expanding exports of its hydrogen fuel cell technology, it was assisted by Canada's trade commissioners who are located in such countries as China, Japan, South Korea, France and Germany. It particularly mentioned the trade commissioners' analysis of international market conditions and introductions to potential customers.

B. Start-up Financing

Global Affairs Canada officials described efforts to scale up and finance Canada's ECT firms as "key to increasing clean-tech exports." Highlighting joint initiatives among Global Affairs Canada, the Business Development Bank of Canada and Export Development Canada, they observed that the Canadian Technology Accelerators programs assist Canada's ECT firms that export to the United States, as well as to Asian and European countries. They indicated that, since 2019, these programs have helped more than 85 of Canada's "most promising clean-tech firms to improve their access to global markets."

Business Development Bank of Canada officials focused on clean-technology activities when mentioning the 2017 federal budget's announcement that the Business Development Bank of Canada would receive $600 million in capital to assist Canadian clean-technology firms that are globally competitive. They pointed out that, as of March 2021, $370 million of that amount had been allocated to such firms through equity or other financing.

According to Global Affairs Canada officials, as of March 2020, Sustainable Development Technology Canada had provided $1.28 billion in funding to 447 clean-technology projects. In their view, these funds "spur the development and scale-up of [Canada's] clean technologies domestically and abroad." They also said that, in 2020, Export Development Canada provided financing to 228 of Canada's ECT firms that were considering international expansion and "facilitated $4.6 billion in trade in the clean-tech space."

The International Brotherhood of Electrical Workers remarked that the Government of Canada could help the country's clean electricity and nuclear technologies firms meet their export objectives by implementing measures to support those "willing to test and deploy" innovative technologies. It explained that these measures could include "direct financial support for first-of-a-kind, commercial-scale products" to help overcome the financial risks involved in developing and selling clean technologies. As well, the International Brotherhood of Electrical Workers emphasized that Canada has "a window of opportunity … to not only claim a share of these global markets but to be looked at as a leader in clean-tech."

Opus One Solutions asserted that, although the Government of Canada has built "a great ecosystem for start-ups," the Government has not "looked holistically at the scale-up" of Canada's ECT firms, which has limited growth in their exports. Recognizing that foreign customers may prefer to have products tested in their jurisdictions rather than in manufacturers' domestic production facilities, Opus One Solutions urged the

Government to provide Canada's ECT firms with financing to help them undertake pilot projects in other jurisdictions. Innovation, Science and Economic Development Canada officials highlighted federal efforts to help Canada's ECT firms with their "first commercial demonstration projects" in international markets.

C. International Trade Agreements

Global Affairs Canada officials pointed out that Canada's ECT firms that export benefit from trade agreement provisions concerning tariff elimination, labour mobility and access to foreign government procurement. Moreover, they maintained that Canada's trade and "overall environmental objectives" are "very compatible" with the country's priorities at the World Trade Organization and in trade negotiations with other jurisdictions.

According to Foresight Cleantech Accelerator Centre, such trade agreements as the Canada–European Union *Comprehensive Economic and Trade Agreement* make it easier for Canada's ECT firms to establish business relations in, as well to access markets in, other countries. With a particular focus on Europe and some Asian countries, Pyrowave said that it encounters no difficulties when exporting its technology to regions where Canada has trade agreement partners.

D. Non-tariff Trade Barriers

LNG Canada characterized "uncertainty in the regulatory regime" concerning greenhouse gas emissions and the construction of pipelines as a non-tariff trade barrier that has affected its ability to export liquefied natural gas. The Canadian Association of Petroleum Producers described the cancellation of oil pipeline projects, such as Keystone XL, as a non-tariff trade barrier and argued that the ability of Canada's oil sector to remain a primary source of exports to the United States and other international markets "hinges on [the sector's] ability to get those commodities to those markets."

AddÉnergie Technologies Inc. observed that differences around the world in codes and standards relating to the charging of electric vehicles continue to be "a major source of uncertainty and non-tariff [trade] barriers" for the electric vehicle subsector. Moreover, AddÉnergie Technologies Inc. highlighted its efforts to establish consistent metrology standards across North America, which would increase opportunities for AddÉnergie Technologies Inc. to "sell to a broader audience."

Natural Resources Canada officials asserted that "there is a benefit to [having] common" North American standards for charging electric vehicles. They pointed out that the Governments of Canada and the United States are collaborating in this regard.

Recognizing the existence of integrated supply chains and collaboration between Canada and the United States designed to standardize regulations, Electric Mobility Canada added that the electric vehicle subsector has "three or four standards" that regulate the charging of electric vehicles. It characterized differences in these standards as "a real problem," and advocated harmonized standards and regulations to accelerate the adoption—within North America—of "electric mobility across the board from light to heavy-duty vehicles."

E. Other

Indicating that Canada's mineral deposits can be mined to produce batteries for electric vehicles, First Cobalt Corp. urged the Government of Canada to focus "on connecting the value chain from [Canadian] mines through to the assembly plants, with a keen focus on battery production here in Canada." Citing abundant natural resources and proximity to "clean" hydroelectricity and nuclear energy, it noted that Canada "can win the battle to create a North American battery supply chain …."

Regarding domestic infrastructure to support exports of Canadian ECT goods and services, WaterPower Canada stated that the potential to increase hydroelectricity exports to the United States depends on investments that would enable new hydropower generation projects to be developed. It commented that, in the Roadmap for a Renewed Canada–United States Partnership, Prime Minister Justin Trudeau and President Joe Biden agreed to work together to build clean energy infrastructure, including "cross-border clean electricity transmission."

Concerning border carbon adjustments, Environment and Climate Change Canada officials said that the Government of Canada is exploring all measures to ensure that the country's transition to an economy based on low-carbon energy sources is "fair and predictable" for domestic firms and supports these firms' international competitiveness.

Pyrowave argued that the prices of goods produced in countries that use high-carbon energy sources do not reflect those goods' true cost because environmental impacts are not considered, with the result that Canadian imports of such goods disadvantage domestic manufacturers of similar goods that have been produced using low-carbon energy sources. In Pyrowave's opinion, a border carbon adjustment in the form of a carbon border tax would create "a level playing field" by imposing added

costs on goods imported from jurisdictions that have "inadequate" environmental regulations. Pyrowave also stated that the Government of Canada should provide rebates to Canadian exporters that manufacture goods using low-carbon energy sources to help them compete with foreign firms.

THE COMMITTEE'S THOUGHTS AND RECOMMENDATIONS

In October 2018, Innovation, Science and Economic Development Canada's Clean Technology Economic Strategy Table established the goal of having ECT goods and services be one of Canada's top five exports by 2025. The Committee recognizes that, from a global perspective, Canada has a comparative advantage in certain ECT subsectors, including clean electricity and small modular reactors, and is competitive in such other subsectors as electric vehicles and batteries.

Trade agreements can contribute to the international competitiveness of Canada's ECT firms, including by eliminating or reducing tariffs and non-tariff trade barriers. The Committee observes that there are opportunities for these firms to increase their exports, especially to jurisdictions with which Canada currently has a trade agreement. However, the negotiation of additional trade agreements would support diversification into other international markets, with potential benefits for Canada's ECT firms that export and those that wish to do so. From this perspective, the Committee recommends:

Recommendation 1

That the Government of Canada take actions designed to increase market access for Canadian exports of environmental and clean technology goods and services. In this context, the Government should conclude additional trade agreements that contain provisions designed to eliminate or reduce tariffs and non-tariff barriers to such exports.

Recommendation 2

That, on an urgent basis, the Government of Canada support global diversification efforts through strengthening the supply chains needed to transport and export environmental and clean technology goods and services. In taking actions relating to these supply chains, the Government should maximize export opportunities to existing and new markets in Europe, the Asia-Pacific region, the Caribbean, Latin America and Africa.

The Government of Canada has a range of programs, joint initiatives and services that support Canada's firms that either export or wish to do so. In that regard, the

Committee notes that the Trade Commissioner Service's programs and its global network of trade commissioners help Canada's ECT firms to export to markets throughout the world. Thus, the Committee recommends:

Recommendation 3

That the Government of Canada ensure that Global Affairs Canada's Trade Commissioner Service has the resources needed to support Canada's current and future exporters of environmental and clean technology goods and services.

Some of Canada's ECT firms face challenges in accessing adequate financing, which can make it difficult to scale up, including with the objective of either beginning to or increasing exports. The Committee underscores that the Government of Canada currently has a range of measures designed to help firms—including those in the ECT sector—scale up and be globally competitive. However, as with all federal supports, firms are best able to access appropriate measures when they are fully aware of their existence and eligibility requirements. In this context, the Committee recommends:

Recommendation 4

That the Government of Canada take efforts to enhance awareness, among Canada's current and future exporters of environmental and clean technology goods and services, of federal financing and other support programs designed to help firms scale up and compete in international markets. In doing so, the Government should work with Export Development Canada, the Business Development Bank of Canada, Sustainable Development Technology Canada and Global Affairs Canada's Trade Commissioner Service. Finally, the Government should ensure that information about federal support programs is readily available and easily accessible, and that eligibility requirements for various measures are clearly specified.

Recommendation 5

That the Government of Canada support Canada's current and future exporters of environmental and clean technology goods and services by increasing the level of its engagement with relevant stakeholders in the country's environmental and clean technology sector. Through discussions and consultations, the Government should ensure that shared objectives are met in two areas: maximizing the value and volume of exports of Canadian environmental and clean technology goods and services; and enhancing awareness among federal officials about the challenges and opportunities that Canada's current exporters of environmental and clean technology goods and services experience in international markets.

A number of governments worldwide have been examining the concept of border carbon adjustments, including to assess whether they should be implemented to reduce greenhouse gas emissions and/or to mitigate the potential trade-related impacts of various jurisdictions' national climate policies. The Committee is aware of the Government of Canada's ongoing examination of the role that border carbon adjustments could play as Canada transitions to a domestic economy based on low-carbon energy sources. With duties applied on imports and rebates for certain domestic producers being among the border carbon adjustment options, such policies might help Canada's ECT firms compete with some foreign firms on a "level playing field." Consequently, the Committee recommends:

Recommendation 6

That, when completed, the Government of Canada publish the results of its assessment of border carbon adjustments. Furthermore, if any related measure is adopted, the Government should ensure that it is consistent with Canada's international trade obligations and supports the competitiveness of the country's environmental and clean technology firms.

Recommendation 7

That the Government of Canada limit the volume of goods imported from jurisdictions that emit high levels of greenhouse gases by exploring the development and implementation of a national "low-carbon footprint" policy at Canada's borders.

Recommendation 8

That the Government of Canada develop and implement rebates for Canadian firms that produce environmental and clean technology goods and services using low-carbon energy sources. Such rebates should be designed to support and enhance these firms' international competitiveness.

Harmonized codes, standards and regulations help to reduce—if not eliminate—non-tariff barriers to trade. In the context of Canadian ECT goods and services, the Committee highlights that harmonization efforts by Canada and its trading partners could both provide greater predictability for firms and help to facilitate international trade. Canada–U.S. efforts in relation to harmonized codes, standards and regulations in non-ECT sectors—particularly those that are integrated—could be a model for successful collaboration regarding ECT goods and services, including in relation to electric vehicle charging stations. For these reasons, the Committee recommends:

Recommendation 9

That the Government of Canada work with Canada's trading partners, particularly the United States and Mexico, to harmonize codes, standards and regulations relating to environmental and clean technology goods and services. On a priority basis, the harmonization efforts should focus on electric vehicle charging stations and the components in electric vehicles that connect with these charging stations.

"Buy America" policies and certain U.S. safeguard measures are a source of concern in Canada. The Committee acknowledges that such policies and measures affect Canadian firms partly because of the nature and extent of economic integration between Canada and the United States, and the associated high volume of goods that cross the shared border. Awareness in the United States about the effects of such policies and measures in both countries, and about the importance of uninterrupted supply chains, helps Canada to access the U.S. market, including in relation to ECT goods and services. Therefore, the Committee recommends:

Recommendation 10

That the Government of Canada continue with and enhance its advocacy efforts in the United States and Mexico concerning policies and measures that could affect—or are affecting—exports of Canadian environmental and clean technology goods and services. The Government's efforts should occur alongside, and be informed by, similar efforts by other governments in Canada, as well as by such stakeholders as Canadian firms and employees, and—respectively—their trade associations and organized labour groups.

Finally, domestic infrastructure is important for facilitating Canadian exports and for maximizing the benefits of trade agreements. The Committee realizes that adequate infrastructure would help to ensure the international competitiveness of Canada's current and future ECT exporters. Infrastructure investments could help ECT goods and services become one of Canada's top five exports by 2025. As a result, the Committee recommends:

Recommendation 11

That the Government of Canada collaborate with other governments in Canada, as well as with other relevant stakeholders, in ensuring that Canada has the infrastructure that is needed as the country seeks to increase exports of environmental and clean technology goods and services.

Recommendation 12

That, with a view to enhancing Canadian exports, the Government of Canada consider the creation of a framework that would lead to greater global demand for carbon capture technologies developed in Canada. If such a framework is created, the Government should consider export opportunities to jurisdictions in the Indo-Pacific region.

APPENDIX A
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
Department of Natural Resources	2022/03/21	9
Allison Christie, Director		
Daniel Dufour, Director General, Innovation Branch		
Anna van der Kamp, Director		
Amanda Wilson, Director General, Office of Energy Research and Development		

APPENDIX B
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.

43rd Parliament, 2nd Session

Organizations and Individuals	Date	Meeting
Canadian Nuclear Association	2021/05/03	28
John Gorman, President and Chief Executive Officer		
Carbon Upcycling Technologies	2021/05/03	28
Madison Savilow, Chief of Staff		
Apoorv Sinha, Chief Executive Officer		
Electric Mobility Canada	2021/05/03	28
Daniel Breton, President and Chief Executive Officer		
Heliene	2021/05/03	28
Martin Pochtaruk, President		
Canadian Association of Petroleum Producers	2021/05/07	29
Tim McMillan, President and Chief Executive Officer		
First Cobalt Corp.	2021/05/07	29
Trent Mell, President and Chief Executive Officer		
International Brotherhood of Electrical Workers	2021/05/07	29
Ross Galbraith, International Representative		
Matt Wayland, Executive Assistant to the International Vice-President and Canadian Director of Government Relations		
Pyrowave	2021/05/07	29
Jocelyn Doucet, President and Chief Executive Officer		
AddÉnergie Technologies Inc.	2021/05/10	30
Travis Allan, Vice-President, Public Affairs, and General Counsel		

Organizations and Individuals	Date	Meeting
Ballard Power Systems Inc.	2021/05/10	30
Nicolas Pocard, Vice-President, Marketing		
LNG Canada	2021/05/10	30
Peter Zebedee, Chief Executive Officer		
Opus One Solutions	2021/05/10	30
Hari Suthan Subramaniam, Chief of Strategic Growth		
Business Development Bank of Canada	2021/05/14	31
Susan Rohac, Vice-President, Cleantech Practice		
Department of Foreign Affairs, Trade and Development	2021/05/14	31
Doug Forsyth, Director General, Market Access		
Rosaline Kwan, Director General, Trade Sectors		
Department of Industry	2021/05/14	31
Andrew Noseworthy, Assistant Deputy Minister, Clean Technology		
Department of Natural Resources	2021/05/14	31
Daniel Dufour, Director General, Innovation Branch		
Marco Presutti, Director General, Low Carbon Energy Sector, Electricity Resources Branch		
Department of the Environment	2021/05/14	31
Jeanne-Marie Huddleston, Director General, Bilateral Affairs and Trade, International Affairs Branch		
Export Development Canada	2021/05/14	31
Sophie Dumoulin, Director, Cleantech Group		
Guillermo Freire, Vice-President, Structured and Project Finance		
Foresight Cleantech Accelerator Centre	2021/05/14	31
Jeanette Jackson, Chief Executive Officer		
Forest Products Association of Canada	2021/05/14	31
Kate Lindsay, Senior Vice-President, Sustainability and Environmental Partnerships		
Mahima Sharma, Director, Environment, Innovation and Mill Regulations		

APPENDIX C
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.

43rd Parliament, 2nd Session

WaterPower Canada

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. 28, 29, 30 and 31) from the 43rd Parliament, 2nd Session and (Meetings Nos. 9, 22 and 35) from the 44th Parliament, 1st Session is tabled.

Respectfully submitted,

Hon. Judy A. Sgro
Chair