

Changing Gears: Sustainable Finance Progress In Canada

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Foreword

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We are reaching an inflection point on sustainable finance. Not only is sustainable finance essential to ensure markets allocate capital in a manner consistent with global climate objectives, it is fast becoming a competitive issue for businesses and for countries. Trillions of dollars of investment capital will be required in aligning industry sectors with viable pathways to net-zero by 2050. Opportunities will be numerous. While public funds will be essential, it is only private markets that can match the scale of investment required. Governments, businesses, and the financial sector are all expected to develop net-zero strategies and plans, providing both foresight and oversight of sustainability risks and opportunities, and executing accordingly. Sustainable finance provides many of the necessary market-based tools to allow this to happen.

When I joined with my colleagues on the [Canadian Expert Panel on Sustainable Finance](#), our message focused on the need to develop a strategic roadmap to integrate sustainability into financial system policies and standards, bolster collaboration between the public and private sector, and increase investment in industry transition to strengthen Canadian competitiveness. It felt urgent to work towards a state where the notions of sustainable finance were integrated throughout the financial sector and applied to every day decision making, where sustainable finance was simply finance. We hoped that the report could act as an enduring roadmap for constructive change.

Since that time, virtually all relevant analysis has continued to point in this same direction, if anything amplifying the urgency and scale of effort required. Investors of many stripes are increasingly at the forefront of evaluating our responses to the climate challenge, allocating capital accordingly, with significant implications for the Canadian economy. The pandemic has only served to further intensify the focus on the social aspects of sustainability, including a clear societal call to mitigate and adapt to climate change. Topics such as adaptation and resilience, natural capital solutions, financial structures for ecosystem protection, Indigenous involvement, carbon offset markets, and others have been added to the essential 'to do' list.

As a result, I welcome the accountability of this report by the Institute for Sustainable Finance (ISF) on Canada's progress in sustainable finance. It takes stock of what has been achieved and not achieved since the [Expert Panel recommendations](#) were released just over two years ago. It is both timely and necessary. The central message from this ISF report is that we can and must do better; time is of the essence, and Canada needs to up its game to develop a competitive and sustainable economy which supports the need for an inclusive and rapid transition to net-zero. This analysis is not a surprise, but it is another wake up call to the public and private sectors that timely implementation is critical.

I am heartened by many of the advances of the private sector. Leading institutions have enhanced their disclosure and begun to experiment with risk and scenario analysis. Investment practices have evolved rapidly and meaningfully. Net-zero targets and financing commitments are being established. Training programs have been created to enhance knowledge and capacity. Guidance on legal and governance matters has emerged. Available risk capital has expanded. Notwithstanding these and other advances, there is an urgent need to grow the number of parties demonstrating concerted action, and to increase the scope, intensity, ambition, and speed of the efforts. One important learning is that as anticipated, for the financial system to act in a rational data-driven manner, data and disclosure are essential yet still lacking.

At the public sector level, again much has happened. Policies on carbon pricing have been further clarified. Emission reduction targets have been enhanced and will become law. Important advisory bodies have been established and regulators have begun to interact with the financial sector on risk and scenario planning. Infrastructure planning and funding has progressed. Retrofit finance is expanding. Additional support for cleantech innovation has been announced. Nevertheless, significantly more must be done, in conjunction with the private sector, to provide direction, establish boundaries, align regulation, and incent constructive action. The clarification of fiduciary responsibility, establishment of mandatory climate disclosure frameworks, and the accessibility and comparability of financially relevant climate data are, among other issues, ripe for advancement. Efforts surrounding these foundational issues remain limited or at early stages of development.

It is always easier to write a report than execute upon it, however, arguably, our collective analysis of relative trade-offs for more determined action remains somewhat short sighted. Our near-term risk aversion may underestimate the price for sluggish action, both environmentally and commercially, that might later be paid. Likewise, new opportunities for growth appear to be too heavily discounted in the face of uncertainty, notwithstanding what has been dubbed by many leading commentators 'one of the greatest commercial opportunities of our time'.

All in all, I remain optimistic. Canada has the necessary ingredients to excel in this space: financial expertise, business acumen, sophistication in our public sector, and a uniquely collaborative mindset. All of these are critical to align capital in a manner which will support a timely, commercially successful and just transition for the benefit of Canadians and the world more broadly. We need to come together to invest in our future success by fully stepping up to our environmental and social challenges, and thereby making our economy healthier and more resilient.

I anticipate that this report by the ISF will serve to improve our efforts in sustainable finance. I look forward to supporting the ISF as they continue to provide research, education, collaboration and engagement to accelerate solutions and hold all of us to account.

Acknowledgments

A significant undertaking such as this required numerous contributions from several individuals. We would like to first acknowledge the significant time commitment and contributions made by the Advisory Council convened for this project, as listed in Exhibit 2. In addition, we thank the 34 experts that agreed to be interviewed (listed in Exhibit 1) for providing us with excellent comments and insights into the current state of sustainable finance in Canada, as well as identifying key areas that must be addressed in an urgent manner.

While we cannot name everyone individually who contributed, we would also like to note the significant contributions of the following people:

- Andrea Moffat, for all of her contributions from start to finish on this project, including assistance in convening the Advisory Council, participating in the interview and organizational processes, and providing significant contributions to the body of the report.
- Andy Chisholm, for his comments during the interview process, and for the excellent Forward he prepared for the report.
- Barb Zvan and Tiff Macklem, original members of the Expert Panel on Sustainable Finance, for their valuable contribution to sustainable finance and for sharing their perspectives as we prepared this update report.
- Contributing Authors on the various feature boxes included throughout the report:
 - Clean Energy Canada
 - The Responsible Investors Association (RIA Canada)
 - The Transition Accelerator
 - Efficiency Canada
 - Philip Duguay, Canada Grid and The Transition Accelerator
 - Michael Thom, CFA Societies Canada, and Ian Robertson, Odlum Brown Ltd.
- Sara Alvarado and Maya Saryyeva from the ISF team.
- Our communications team (including the design and layout team), which is comprised from both the Marketing and Communications team at Smith School of Business, Queen's University, and from Argyle Communications.

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Executive Summary

The Canadian Expert Panel on Sustainable Finance (CEP) was convened in 2018 to explore opportunities and challenges facing Canada in this field.¹ The panel's terms of reference included working with the private sector and the federal government to consider private-public leadership opportunities to advance sustainable finance opportunities in Canada. The CEP released its final report in June of 2019, in the form of 15 recommendations "aimed at 'connecting the dots' between Canada's climate objectives, economic ambitions and investment imperatives" (Expert Panel Report, I). The need to make these connections has only grown in urgency over the past two years in the wake of the most recent Intergovernmental Panel on Climate Change (IPCC) report, Canada's heightened climate target ambitions, and intense global public and private sector focus on net-zero climate emissions, plans, and adaptation strategies. We have also seen increasing pressure from the global investment community to address and disclose material climate risk.

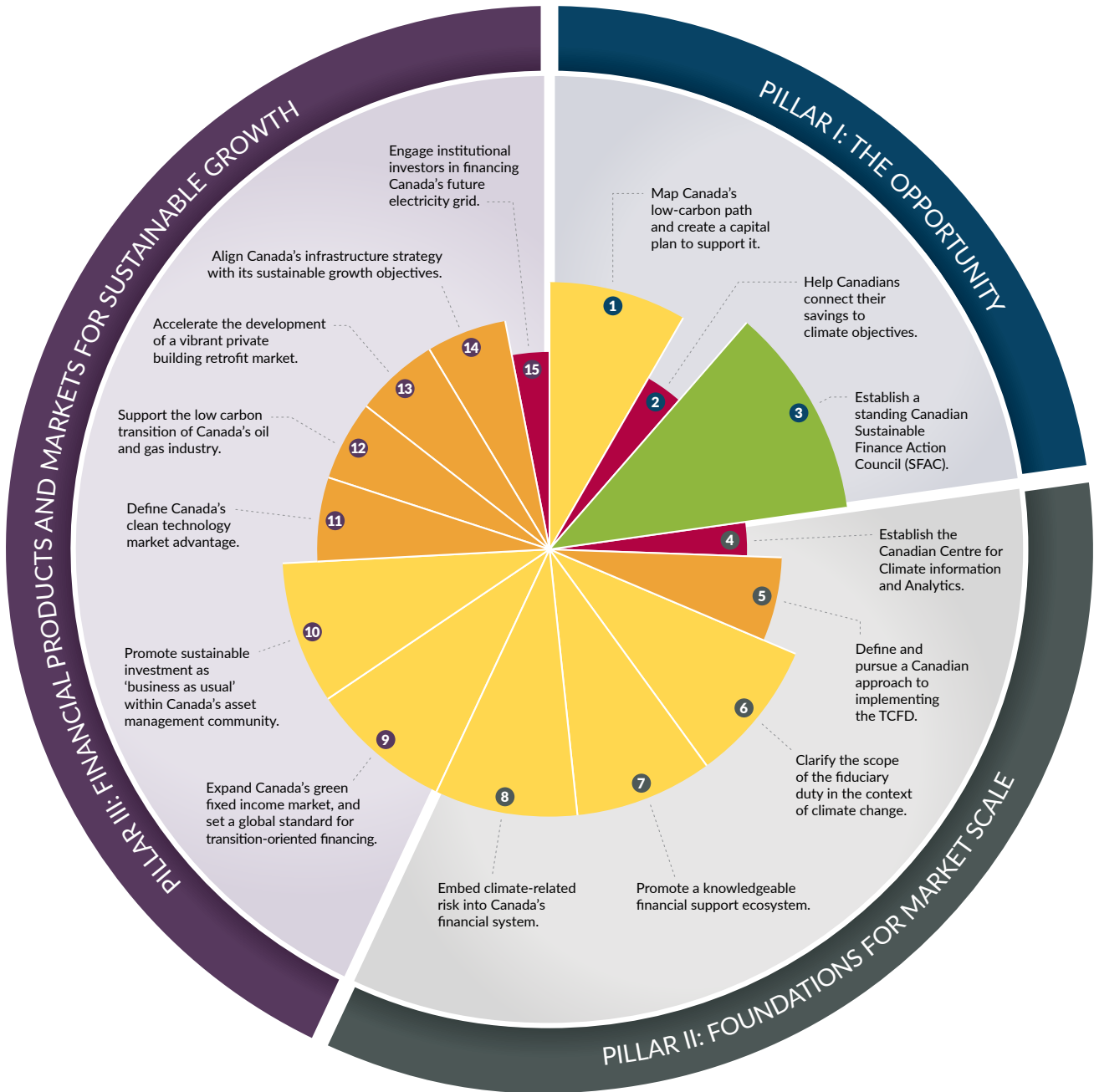
The ISF has undertaken an assessment of Canada's progress on the Expert Panel recommendations and on sustainable finance in general, and we highlight where there is need for additional and accelerated actions. There is a great deal of interconnectivity between the CEP recommendations and the key issues identified during the assessment process. This is a testament to the fact that the CEP hit the nail on the head in terms of identifying the key sustainable finance issues facing Canada, which is the good news. The bad news is that, despite considerable progress, many of the central issues noted in the CEP report facing Canada in 2019 are still among those we are grappling with today.

RESEARCH APPROACH

Our report begins with a thorough analysis of the progress made with respect to implementing the 15 recommendations as a springboard to discuss more broadly the current state of sustainable finance development in Canada. We begin our analysis by conducting a landscape review of actions and initiatives that have taken place over the last two years with respect to the recommendations. We supplement this landscape review with an interview process that engaged 34 interviewees, including three of the four members of the CEP. The experts were chosen to provide diverse perspectives on the numerous sustainable finance issues facing Canada today. We also brought together an Advisory Council of experts from across the financial industry to provide input and advice on the research and analysis.

PROGRESS ON CEP RECOMMENDATIONS

The figure below summarizes our assessment of progress on the 15 recommendations.



Progress Made

- **Significant:** Substantial actions and increased momentum have resulted in tangible outcomes.
- **Moderate:** Some substantial actions and/or meaningful momentum are increasing the near-term likelihood of tangible outcomes.
- **Marginal:** While some action has taken place or is underway, momentum toward tangible outcomes has been slow.
- **Minimal:** Few actions have/are taking place and/or there is limited momentum toward tangible outcomes.

KEY THEMES

We combined the results of our landscape review with the feedback from our interview process to identify key themes and potentially high impact areas critical to Canada's future progress with respect to making an effective transition to a sustainable and prosperous economy. We briefly discuss each of these seven themes below, and refer the reader to the complete report for additional details:

- 1. Accelerated action and execution is needed.** Canada has started to develop many of the foundational elements laid out in the Expert Panel recommendations necessary to accelerate sustainable finance. While it has only been two years since the release of the report, and we have been dealing with a global pandemic for the last year and a half, it is clear that progress has been too slow, and there is still a great deal of work to do. Clear execution is needed over the short term, and there is financial institution and expert support and engagement to help move this forward.
 - The most frequent comment made by interviewees was that Europe and the UK have been setting the tone in terms of discussions and actions related to sustainable finance issues, and that Canada has fallen behind. This leaves us playing catch-up, and it is becoming clear that the Biden Administration will be moving very quickly.
 - The general consensus among interviewees was that the private financial sector is now moving faster than the government and regulators in Canada. The government needs to set the framework and standards for the private sector to respond and to attract investment for industry to transition. Experts made particular reference to important foundational elements such as disclosure and fiduciary duty. The analysis and research on how to implement these elements are available, and governments need to act now to set these standards and to establish processes for their evolution over time.
- 2. Our financial ecosystem needs to embrace change.** There was strong support for the need to shift the approach and behaviours of Canada's investment industry and financial institutions. Sustainable finance has moved beyond being a functional requirement for firms, and it is now a commercial imperative. This was reflected in many comments relative to several specific and related issues, which are divided into private, public, and public-private sector categories below; although, there is clearly a relationship across the first two categories:
 - Private Sector Focus**
 - a. Creating and taking advantage of innovative financing options and investment products, which was the most frequently cited opportunity.
 - b. Engaging the public and leveraging the retail investor base to support the net-zero transition.
 - c. Capitalizing on the investor engagement opportunity.
 - Public Sector Focus**
 - d. Mandating disclosures in alignment with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations, as well as those of the Sustainability Accounting Standards Board (SASB).
 - e. Clarifying the scope of fiduciary duty in law and practice.
 - Public-Private Sector Focus**
 - f. Use Canadian financial sector expertise on infrastructure to develop a pipeline of projects to finance in Canada for net-zero transition.
 - g. Addressing sustainable finance data issues.
 - h. Dealing with issues related to investment product labelling and greenwashing.
 - i. Dealing with the risks associated with capital flight.
- 3. Canadian-specific solutions are required.** We need sector-specific decarbonization pathways and transition scenarios that are supported by research within a Canadian context.¹ Further, we need to develop the financing innovations and mechanisms for implementation. It is worth noting that supporting the energy transition was a commonly cited need for short-term action. In addition, transitioning the oil and gas sector and ensuring a just transition were commonly cited risks. Related to this theme, interviewees emphasized the importance of completing the Canadian Transition Taxonomy.

¹ For example, please refer to: (1) "Transition Accelerator, "Pathways to Net-zero," <https://transitionaccelerator.ca/pathways-to-net-zero/>; and, (2) Canadian Institute of Climate Choices, "Canada's Net-zero Future," <https://climatechoices.ca/reports/canadas-net-zero-future/>.

4. **Sustainable finance must include more than climate.** In the wake of COVID-19 and in the context of Canada's reckoning with the urgency of truth and reconciliation with Indigenous peoples, interviewees urged for a broader, more inclusive, and socially concerned sustainable finance conversation. It is also important to consider biodiversity loss and ecosystem collapse, which the World Economic Forum rated as one of the top five risks over the next 10 years.²
5. **Canada's net-zero transition requires a more unified approach and narrative.** There has been a largely disaggregated mosaic of perspectives on sustainable finance and the net-zero transition in Canada. It was noted that the concept is still not well-defined and understood. As a result, which activities and actions count as net-zero remain to be determined and are likely to be industry-specific. There is a need to establish a more centralized voice and perspective for the country, as well as strengthened communication channels across public and private sectors. Relatedly, policy uncertainty in Canada continues to be a major concern among participants that were interviewed.
6. **While climate mitigation is critical, we need a greater focus on adaptation and resiliency.** Many interviewees noted that climate resilience and adaptation have continued to be priorities as climate change impacts become more apparent. With increasing number and intensity of fires and floods across the country and their impacts on communities and businesses, it is not surprising that this is top of mind. In addition, concerns were raised about access to reinsurance, as the large reinsurers are European and feeling the pressure to transition away from high-carbon sectors.
7. **Clean Innovation and other opportunities need more support.** The importance of capitalizing on cleantech opportunities, as well as our lack of progress to date in doing so was frequently noted. For example, technologies to support oil and gas transition such as hydrogen, and carbon capture, utilization, and storage (CCUS) were frequently raised as Canadian opportunities. Other "not to be missed" Canadian opportunities include scaling building retrofits, becoming a global leader in the production of transition materials (e.g., minerals to batteries to electric vehicle supply chain), and leveraging our low-carbon electricity grid for inter-provincial and North-South integration into US electricity markets. Finally, it was viewed that Canada has opportunities for nature-based solutions and taking advantage of carbon markets as they scale.

CONCLUSIONS

The transition of Canada's economy to a sustainable and prosperous one is both a sprint and a marathon. What this report suggests is that we have been slow out of the gate, and also that we are making progress – there are some opportunities to make up for lost ground and to put ourselves in good position for the long run. The Canadian Expert Panel Report provided a strategic roadmap on sustainable finance for the public and private sectors to further develop and implement. Two keys to accelerating this progress are creating a more unified approach and unlocking private capital, so that it will increasingly be allocated through a sustainable finance lens.

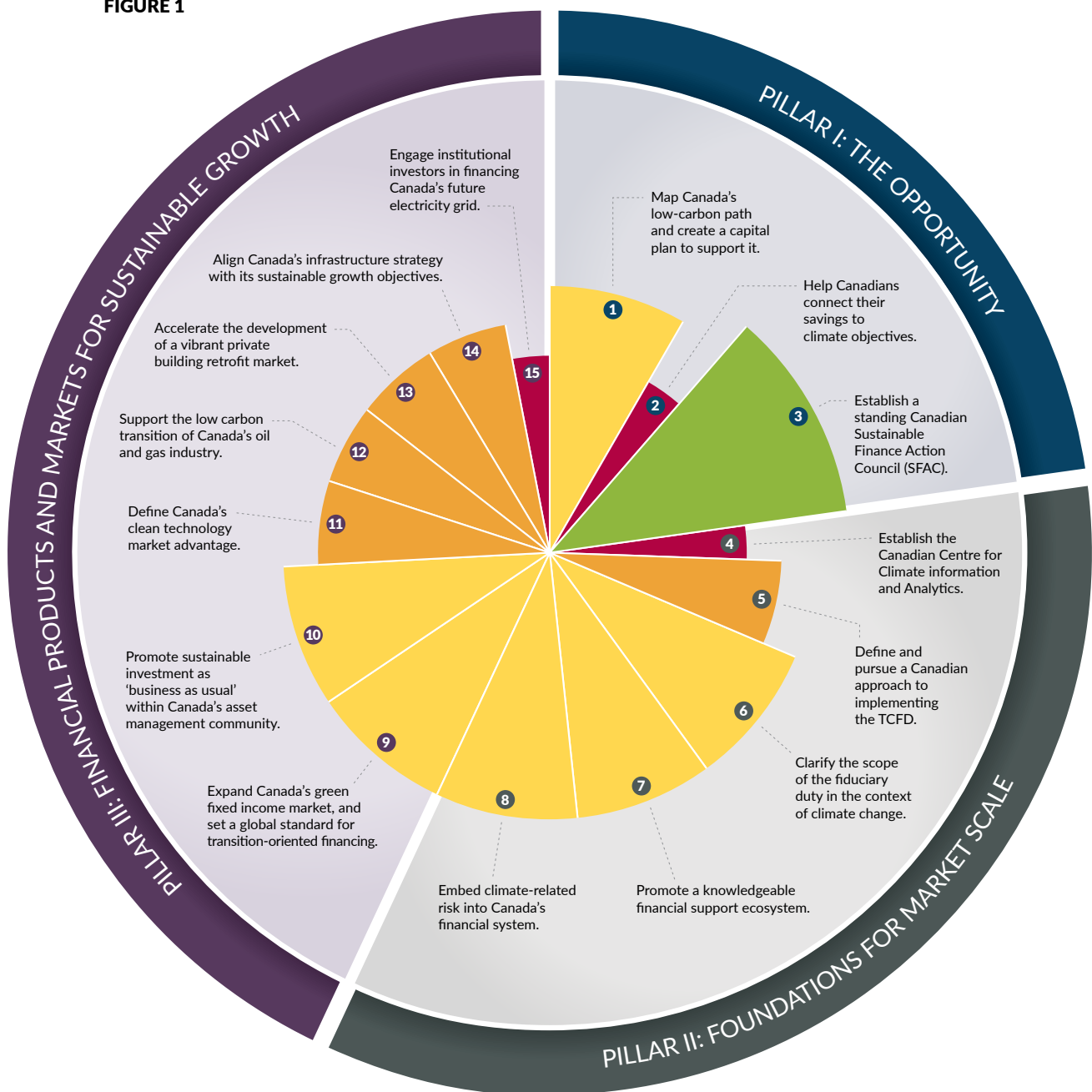
With global momentum continuing to build on sustainable finance, there is an urgent need to execute on the foundational recommendations of fiduciary duty, disclosure, transparent and usable data, and a clear taxonomy for transition. Additional collaboration, engagement, and a transparent process to bring together a coherent public and private sector perspective for executing on these foundational elements are required over the short and long term. The implementation of these foundations will inspire the confidence and clarity for unlocking private capital and the innovation needed to support industry sector transition, infrastructure development, and support for new industries and supply chains for a net-zero, sustainable economy. Success is essential for Canadian competitiveness.

² See: <https://www.weforum.org/reports/the-global-risks-report-2020>.

A. Landscape Review

This section discusses the highlights of our review of progress against the 15 recommendations of the Canadian Expert Panel on Sustainable Finance (CEP) with regards to actions and initiatives that have taken place and/or are in progress. Figure 1 depicts the state of progress in implementing the various recommendations. We elaborate on these conclusions below – in order of the recommendations.

FIGURE 1



Progress Made

- Significant:** Substantial actions and increased momentum have resulted in tangible outcomes.
- Moderate:** Some substantial actions and/or meaningful momentum are increasing the near-term likelihood of tangible outcomes.
- Marginal:** While some action has taken place or is underway, momentum toward tangible outcomes has been slow.
- Minimal:** Few actions have/are taking place and/or there is limited momentum toward tangible outcomes.



PILLAR I: THE OPPORTUNITY

Recommendation 1 2 3

Map Canada’s long-term path to a low-emissions, climate-smart economy, sector by sector, with an associated capital plan.

PROGRESS – MODERATE

still room for implementation and results



REMAINING NEED FOR ACTION



Private
30%



Public
70%

COMMENTS:

There has been much progress with respect to Recommendation 1, but there is still much to be done. Some of the significant strides taken towards establishing this roadmap for Canada’s transition include the following:

- The Institute for Sustainable Finance (ISF) released its Capital Mobilization Plan report in September 2020, providing the capital plan to achieving Canada’s 2030 target.²
- In December of 2020, the federal government announced that the price on carbon will increase to \$170 per tonne by 2030.³
- Proposed regulations for the Clean Fuel Standard (CFS) were published in *Canada Gazette, Part I*, on December 18, 2020.⁴
- In February 2021, the Canadian Institute for Climate Choices published “Canada’s Net-zero Future,” which provides an analysis of various potential pathways to net-zero in Canada.⁵
- On March 5, 2021, Environment and Climate Change Canada (ECCC) announced draft regulations to establish the Federal Greenhouse Gas Offset System.⁶
- On March 25, 2021, the Supreme Court of Canada ruled that the current federal carbon pricing regime is constitutional.⁷
- On April 22, 2021, Canada announced plans to increase its emission reduction target to a 40-45% reduction by 2030 relative to 2005 levels.⁸
- In June 2021, Bill C-12, the Canadian Net-Zero Emissions Accountability Act, passed in the House of Commons and the Senate and will become law.²
- As part of Bill C-12 the *Net-Zero Advisory Board* was established as an independent group of 14 members mandated to provide advice to the Minister of Environment and Climate Change, the Prime Minister and Cabinet on the pathways to get to net-zero and interim targets.

Recommendation 1 2 3

Provide Canadians the opportunity and incentive to connect their savings to climate objectives.

PROGRESS – MINIMAL

a gap to examine more deeply



REMAINING NEED FOR ACTION



Private
50%



Public
50%

COMMENTS:

It is interesting to note that during the interview process, discussed in Section B, the 2nd most frequently cited need for action in the short-term is to leverage retail investors. This highlights the importance of Recommendation 2. Our discussion related to Recommendation 10 highlights a notable increase in the amount of financial assets being managed consistent with responsible investing principles, as well as a corresponding increase in the availability of sustainable investment product options. Unfortunately, there is a significant gap on progress made with regard to providing investing incentives, but some progress is currently in motion with respect to 2.2:

- In October 2020, the CFA Societies Canada ESG Working Group submitted a response form regarding the Consultation Paper on the development of the CFA Institute ESG Disclosure Standards for Investment Products. The Exposure draft of the Standard was issued in May 2021, and the final version is expected in November 2021.¹⁰
- On October 7, 2020, the Canadian Investment Funds Standards Committee (CIFSC) released a proposal to adopt a Responsible Investment Fund Identification Framework followed by a 60-day comment period. One of the stated goals was to “align, to the greatest extent possible, with the terminology and the categories of RI strategies that the CFA chooses to promote.”¹¹
- Securities regulators are also beginning to intervene in the area of labelling of ESG investment products and are concerned about investor protection.¹²

Recommendation ① ② ③

Establish a standing Canadian Sustainable Finance Action Council (SFAC), with a cross-departmental secretariat, to advise and assist the federal government in implementing the Panel's recommendations.

PROGRESS – SIGNIFICANT

recently completed



REMAINING NEED FOR ACTION



Private
35%



Public
65%

COMMENTS:

Progress on this recommendation took some time, but the SFAC has recently been established, and its efforts will be important for getting results on many of the other CEP recommendations:

- In December 2020, the federal government announced a commitment of \$7.3 million over three years for the Department of Finance and ECCC to create a public-private Sustainable Finance Action Council (SFAC) aimed at developing a well-functioning sustainable finance market in Canada.¹³
- The Council was formed in June 2021, with a principal mandate “to make recommendations on critical market infrastructure needed to attract and scale sustainable finance in Canada, including: enhanced assessment and disclosure of climate risks and opportunities; better access to climate data and analytics; and common standards for sustainable and low-carbon investments.”¹⁴



PILLAR II: FOUNDATIONS FOR MARKET SCALE

Recommendation 4 5 6 7 8

Establish the Canadian Centre for Climate Information and Analytics (C3IA) as an authoritative source of climate information and decision analysis.

PROGRESS – MINIMAL

lots of room to go



REMAINING NEED FOR ACTION



Private
35%



Public
65%

COMMENTS:

There has been limited progress made with regard to this recommendation. This is unfortunate since data issues are frequently raised in discussions regarding impediments to allocating capital to sustainable finance solutions. However, the SFAC has set up a sub-committee to examine this issue and to come up with solutions.

We do note the following activities that have occurred with respect to this recommendation:

- In June 2019, the Government of Canada launched ClimateData.ca, a new climate data portal. It was developed for users such as public health professionals, engineers, and planners, who require more than general climate change information to help understand and adapt to climate change.¹⁵
- In August of 2020, the Smart Prosperity Institute published “Bridging the Transparency Gap in Sustainable Finance: Advancing the Business Case for the Canadian Centre for Climate Information and Analytics (C3IA).¹⁶
- The ISF is currently in the process of developing a Climate Finance Data Lab.

Recommendation 4 5 6 7 8

Define and pursue a Canadian approach to implementing the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD).

PROGRESS – MARGINAL

need to move faster


REMAINING NEED FOR ACTION


Private
30%



Public
70%

COMMENTS:

During the interview process, the most frequently cited need for action in the short term was to mandate TCFD disclosures, which was noted by 15 interviewees. This reflects the importance of having reliable information in order to allocate capital using a sustainable finance lens. While some progress has been made and we seem to be heading in the right direction, things simply seem to be moving too slowly on this front, especially when compared to international action:

- By August of 2021, there were 94 Canadian TCFD Supporters, including 59 financial institutions.¹⁷
- According to Milani, as of 2020, 42% of S&P/TSX Composite Index issuers reported in alignment with the TCFD recommendations, up from 30% in 2019.¹⁸
- As part of the federal government’s COVID-19 economic recovery strategy, Large Employer Emergency Financing Facility (LEEF) recipient companies were required to commit to publish annual climate-related disclosure reports consistent with the TCFD recommendations.¹⁹
- On November 25, 2020, the CEOs of eight largest Canadian pension plan investment managers, issued a rare joint statement expressing support for companies and investors to provide “consistent and complete” ESG information by leveraging the SASB and TCFD frameworks.²⁰
- Ontario’s 2021 Budget references the recent Ontario Capital Markets Modernization Taskforce report recommendation that the Ontario Securities Commission (OSC) mandate companies to provide ESG disclosure that complies with a significant portion of the approach adopted by the TCFD.²¹
- In Budget 2021, the federal government announced plans to engage with provinces and territories, with the objective of making climate disclosures, consistent with the TCFD, part of regular disclosure practices for a broad spectrum of the Canadian economy.²²
- During June 2021, Canada’s 10 largest pension plans submitted a Statement of Support to the Securities Exchange Commission (SEC) regarding climate disclosures, stating “We recommend moving beyond a principles-based approach, by leveraging the TCFD Framework.”²³
- On August 3, 2021, the Canadian Bond Investors Association (CBIA), which represents over 50 members managing more than \$1.2 trillion in fixed income AUM, published a “Statement on ESG Disclosure and Sustainable Labeled Bonds.” The CBIA asks that companies report relevant ESG data such as those endorsed by SASB and the TCFD.²⁴

Recommendation 4 5 **6** 7 8

Clarify the scope of fiduciary duty in the context of climate change.

PROGRESS – MODERATE

progress has emanated mainly from the private sector and in the form of legal opinions


REMAINING NEED FOR ACTION


Private
10%



Public
90%

COMMENTS:

During the interview process, clarifying the scope of fiduciary duty in practice and in law tied for the second most frequently cited need for action in the short-term, as noted by 12 interviewees. This reflects the importance of having capital allocators and other companies recognize the importance of climate change in their business and capital allocation decisions. While there has been no significant movement on the regulatory front with respect to this recommendation, the private sector, particularly financial institutions, have come to recognize the relevance of climate change in their decision-making process. Some recent legal opinions have verified the importance of climate change for corporations and pension funds:

- In response to CEP Recommendation 6, Sarra and Williams, both Canadian members of the Commonwealth Climate and Law Initiative, published a 2019 report that included recommendations with respect to both fiduciary obligations and disclosure requirements.²⁵
- In June of 2020, Hansell LLP published an important legal opinion indicating that Canadian directors are obligated to consider climate change risks and opportunities relevant to the companies of which they sit on the board.²⁶
- The Institute for Corporate Directors (ICD) is the host of Chapter Zero Canada, the Canadian chapter of the World Economic Forum's (WEF) Climate Governance Initiative (CGI).²⁷ The WEF has developed a set of Climate Governance Principles for boards of directors, set out in its white paper, "How to Set Up Effective Climate Governance in Corporate Boards: Principles and Questions."²⁸
- In December 2020, the Canada Climate Law Initiative published "Audit Committees and Effective Climate Governance: A Guide for Boards of Directors."²²
- At the institutional investing level, RBC's 2020 Responsible Investment Survey of over 800 global investors showed that among the Canadians included in this survey 63% integrated ESG factors because they believed it was a component of their fiduciary duty.³⁰
- A May 2021 legal opinion by Randy Bauslaugh of McCarthy Tétrault LLP, states that climate change considerations lie squarely under the fiduciary responsibilities of pension plans.³¹ The report arrives at this conclusion based on interpretation of current law, and an acceptance of the fact that climate change is a material financial consideration.
- In June 2021, the Commonwealth Climate and Law Initiative (CCLI) published a "Primer on Climate Change: Directors' Duties and Disclosure Obligations."²²

Recommendation 4 5 6 **7** 8

Promote a knowledgeable financial support ecosystem.

PROGRESS – MODERATE

room to accelerate uptake and ensure a coordinated and collaborative approach


REMAINING NEED FOR ACTION


Private
70%



Public
30%

COMMENTS:

There has been moderate progress with respect to improving knowledge and understanding of sustainable finance issues, but there is still room to go. Some of the significant efforts include the following:

- Several organizations throughout Canada are actively strengthening education, training, and collaborative initiatives on climate-related financial risks and opportunities, such as the Responsible Investment Association (RIA), CPA Canada, the CFA Institute and Canadian CFA societies, Finance Montreal, the Global Risk Institute (GRI), the Institute for Corporate Directors (ICD), the Canadian Coalition for Good Governance (CCGG), and the ISF.
- The Canadian Sustainable Finance Network (CSFN) was formed in October 2019, with 42 members representing 14 institutions, and has grown to over 90 members representing 25 institutions. The CSFN is an independent research and educational academic network that convenes academia, industry, and government for bi-monthly research webinars, an annual conference and various other activities devoted to sustainable finance issues.³³

Recommendation 4 5 6 7 8

Embed climate-related risk into monitoring, regulation and supervision of Canada’s financial system.

PROGRESS – MODERATE

room to move


REMAINING NEED FOR ACTION


Private
20%



Public
80%

COMMENTS:

There has been moderate progress on this recommendation, with things moving in the right direction since the Bank of Canada joined the Central Banks’ and Supervisors’ Network for Greening the Financial System (NGFS) in 2019. Many interviewees expressed optimism regarding the impact of the current pilot project regarding climate change scenarios being developed by the Bank, the Office of the Superintendent of Financial Institutions (OSFI), and several key financial institutions.

- In March 2019, the Bank of Canada announced that it had joined the NGFS, and subsequently identified climate change as one of key systemic vulnerabilities to the financial system.³⁴
- In January 2021, OSFI released a consultation paper regarding climate-related risks and the financial sector. With respect to its oversight of federally regulated financial institutions (FRFIs) and federally regulated pension plans (FRPPs). The paper notes that while “OSFI’s current guidance does not reference climate-related risks specifically, it includes principles and expectations that are relevant to FRFI’s (FRPPs) management of these risks.”³⁵
- OSFI and the Bank of Canada are in the midst of a pilot project, along with a number of key Canadian financial institutions, to use climate-change scenarios relevant to Canada to better understand the risks to the financial system with respect to a transition towards a low-carbon economy.³⁶



PILLAR III: FINANCIAL PRODUCTS AND MARKETS FOR SUSTAINABLE GROWTH

Recommendation **9** 10 11 12 13 14 15

Expand Canada's green fixed income market, and set a global standard for transition-oriented financing.

PROGRESS – MODERATE

need to step it up



REMAINING NEED FOR ACTION



Private
50%



Public
50%

COMMENTS:

During the interview process, completion of the Canadian taxonomy was the 6th most frequently mentioned required action in the short term, while developing innovative financing was the most frequently mentioned opportunity. Both facts reflect the importance of developing vibrant green and transition markets, as well as an accompanying taxonomy. There has been moderate progress on these issues, but much work remains, and implementation efforts need to be accelerated. The SFAC has set up a sub-committee to take the Transition Taxonomy work to date and to develop it further into a viable initiative:

- In April 2019, the Canadian Standards Association (CSA Group) established a Transition Taxonomy Technical Committee (TTTC), responsible for developing a Sustainable Finance-Defining Green Taxonomy for Canada. The TTTC is currently developing a framework for both a Canadian-specific standard, and for Canada's participation in formulating a new ISO Sustainable Finance Standard.³⁷ The final report is expected to be released during the fall of 2021.
- The Government of Canada announced intentions to issue its first sovereign green bond in December 2020.³⁸ Within Budget 2021, it was announced that the government will publish a green bond framework in the coming months in advance of the inaugural sovereign green bond, with an issuance target of \$5 billion.³⁹
- In March 2021, sustainable bonds began trading on the Toronto Stock Exchange (TSX).⁴⁰
- Currently, the International Capital Markets Association's (ICMA) Green Bond Principles, Sustainability-Linked Bond Principles, and Climate Transition Finance Handbook Guidance for Issuers serve as important tools for global standards on transition-oriented financing.^{41 42}
- As of Q1 2021, Canada had issued a cumulative total of \$35 billion USD of green, social and sustainability (GSS) debt, placing the country 11th globally, with green bonds and loans originating in Canada comprising \$30 billion USD of the total.⁴³ During 2020, Canadian green bond issuance exceeded \$8.5 billion USD, up from \$7.0 billion in 2019, \$5.5 billion in 2018, and just \$537 million USD in 2016.⁴⁴

Canada Green Bond Scorecard

Global ranking end of Q1 2021: 9th	Number of bonds: 79
Contribution to Canadian green, social and sustainability (GSS) bond market: 86%	Average size: \$459.7 million CAD (\$380m USD)
Number of entities: 32	Repeat issuers: 18
Biggest issue/amount: Province of Ontario / \$7.5 billion CAD	Contribution to the Canadian debt market: 0.8%

Source: Climate Bonds Initiative (https://www.climatebonds.net/files/reports/north_america_sotm_final.pdf)

Recommendation 9 10 11 12 13 14 15

Promote sustainable investment as “business as usual” within Canada’s asset management community.

PROGRESS – MODERATE

need to step it up


REMAINING NEED FOR ACTION


Private
80%



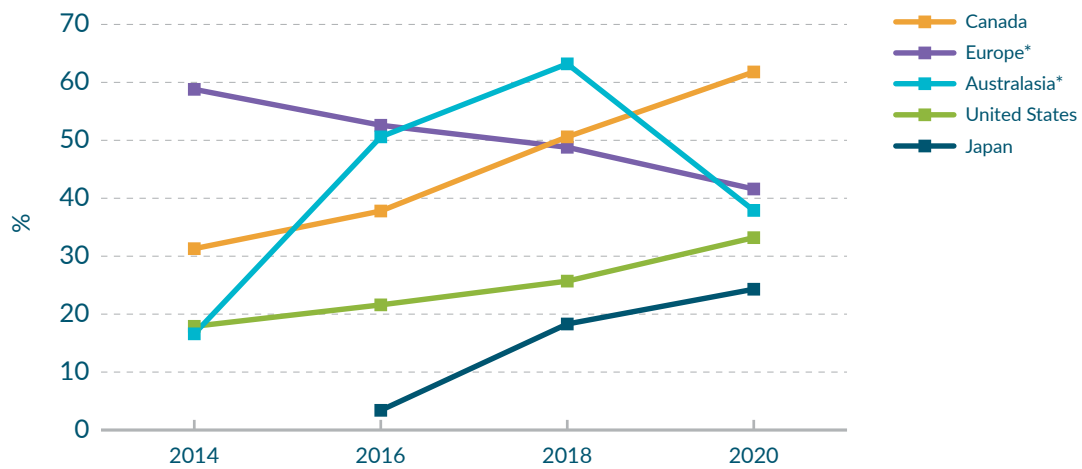
Public
20%

COMMENTS:

There has been moderate progress on this recommendation, with leadership coming from the large pensions, the banks, and independent asset managers. As with many of the recommendations, despite progress, there still is room for future progress:

- By December 2020, more than 3,000 global investors responsible for over USD \$100 trillion in assets were signatories of UN-PRI, including over 150 Canadian signatories.
- According to the 2020 Responsible Investment Association’s (RIA) 2020 Canadian Responsible Investment Trends Report as of December 31, 2019, there were \$3.2 trillion in responsible investment (RI) assets under management (AUM), a 48% growth in RI AUM over a two-year period. RI represents 61.8% of Canada’s investment industry, up from 50.6% two years ago.⁴⁵
- RBC’s 2020 survey of 809 global institutional investors and investment consultants found that 75% integrate ESG factors into their investment decisions. Among the Canadians sampled 87% believed that integrating ESG factors can help mitigate risk, 70% believed ESG-integrated portfolios help generate long-term sustainable alpha, and 63% integrated ESG factors because they believed it was a component of their fiduciary duty.⁴⁶
- Morningstar identified 41 new sustainable funds and ETFs that came to market from Canadian domiciled fund manufacturers during 2020, more than double than 2019. Further, over the past three years, assets invested in sustainable funds and ETFs have doubled, and Morningstar estimates that the year-over-year assets in the space have grown by 67%.
- As announced in February 2021, the RIA, the Shareholder Association for Research and Education (SHARE) and Ceres are working on establishing the Climate Engagement Canada (CEC) initiative, to serve as a national engagement program akin to Climate Action 100+ as per Recommendation 10.2.⁴⁷
- Based on the Global Sustainable Investment Alliance 2020 Review, sustainable investing assets grew in Canada more than threefold from \$1 trillion CAD in 2014 to \$3.2 trillion in 2020. Canada is now the market with the highest proportion of sustainable investment assets at 62%, followed by Europe (42%), Australasia (38%), the United States (33%) and Japan (24%).⁴⁸

Proportion of sustainable investing assets relative to total managed assets 2014-20



*Europe and Australasia have enacted significant changes in the way sustainable investment is defined in these regions, so direct comparisons between regions and with previous versions of this report are not easily made.
 Source: Global Sustainable Investment Alliance
<http://www.gsi-alliance.org/wp-content/uploads/2021/08/GSIR-20201.pdf>

Recommendation 9 10 **11** 12 13 14 15

Define Canada's clean technology market advantage and financing strategy.

PROGRESS – MARGINAL

key priority


REMAINING NEED FOR ACTION


Private
60%



Public
40%

COMMENTS:

During the interview process, development of hydrogen was tied for second as one of Canada's greatest opportunities, development of carbon capture and storage (CCUS) was tied for 4th, while taking advantage of carbon markets and nature-based solutions was 6th. Unfortunately, the consensus is that there has been insignificant progress in developing a cleantech advantage for Canada, and there is still much to do on this recommendation:

- On March 4, 2021, the federal government announced \$2.75 billion in funding over five years, starting in 2021, to enhance public transit systems and switch them to cleaner electrical power, including supporting the purchase of zero-emission public transit and school buses.⁴⁹
- In December 2020, Natural Resources Canada (NRCan) announced a Hydrogen Strategy for Canada. The Hydrogen Strategy for Canada lays out a framework for actions that will cement hydrogen as a tool to achieve the goal of net-zero emissions by 2050 and position Canada as a global, industrial leader of clean renewable fuels.⁵⁰
- In March 2021, Canada and Germany signed a memorandum of understanding (MOU), which outlines a plan to co-operate on energy policy and research. Hydrogen is expected to play a central role as outlined in section IV of the Areas of Cooperation within the MOU.⁵¹
- The Transition Accelerator is developing a hydrogen HUBs initiative designed to accelerate the development of regional hydrogen economies in locations across the country with low-cost, low-carbon hydrogen. These HUBs will later be connected to others across Canada to break the cycle of insufficient hydrogen supply and demand, and achieve sufficient scale for a strong Canada-wide hydrogen economy. HUBs have been launched in Edmonton and Medicine Hat as of August 2021.
- Canada's first hydrogen HUB was launched in April 2021 outside of Edmonton, with \$2 million in funding from Western Economic Diversification Canada, Alberta's Industrial Heartland Association and Emissions Reduction Alberta.⁵²
- In June 2021, the Federal and Alberta government signed an agreement with a private company that could lead to a \$1.3 billion hydrogen plant being built in Edmonton.⁵³



- There are multiple avenues for funding available to Canadian cleantech companies available through Export Development Canada (EDC), Business Development Canada, as well as Sustainable Development Technology Canada (SDTC). Additionally, the Clean Growth Hub is a free service offered by the Government, that works with clean technology producers and adopters to help find federal programs and services to advance clean tech projects.⁵⁴
- In December 2020, the federal government announced a \$3 billion investment over 5 years through the Strategic Innovation Centre’s Net-zero Accelerator, which supports projects reducing domestic emissions across the economy.⁵⁵ Additionally, Budget 2021 adds up to \$17.6 billion in green recovery spending, including an additional \$5 billion seven-year commitment to the Net-Zero Accelerator.⁵⁶
- Within Budget 2021, is a proposal to reduce, by 50%, the general corporate and small business income tax rates for businesses that manufacture zero emission technologies. The reductions would go into effect on January 1, 2022, and would be gradually phased out starting January 1, 2029 and eliminated by January 1, 2032.⁵⁷
- Further, the Budget proposes an investment tax credit for capital invested in carbon capture, utilization, and storage (CCUS) projects,⁵⁸ as well as \$319 million in funding over seven years to support research, development, and demonstrations to improve the commercial viability of CCUS.
- In June 2021, Natural Resources Canada launched a \$1.5 billion Clean Fuels Fund. The fund will support building new or expanding existing clean fuel production facilities, including hydrogen, renewable diesel, synthetic fuels, renewable natural gas and sustainable aviation fuel.⁵⁹
- On August 9, 2021, Natural Resources Canada opened a call for studies on carbon capture technologies.⁶⁰
- Canada’s cleantech sector, including renewables and clean energy firms listed on the TSX and TSXV, secured \$3.09 billion in equity financings during the first half of 2021, a 335% increase over the same period last year, according to data from the TMX Group.⁶¹

TSX & TSXV Clean Energy and Renewable Market Cap and Financings for First Half

	H1 '15	H1 '16	H1 '17	H1 '18	H1 '19	H1 '20	H1 '21
Number of issuers	119	109	96	90	84	81	88
Market capitalization (\$ Bn)	29.04	33.73	41.39	40.81	44.70	53.17	89.13
New listings	2	2	1	3	1	0	16
Equity capital raised (\$M)	1,450	2,414	287	1,401	324	831	3,090
Number of financings	50	47	29	45	36	24	44

Source: Financial Post (<https://financialpost.com/commodities/energy/renewables/canadian-cleantechs-335-surge-in-financing-sets-up-record-year>)

Recommendation 9 10 11 **12** 13 14 15

Support Canada's oil and natural gas industry in building a low-emissions, globally competitive future.

PROGRESS – MARGINAL

key priority


REMAINING NEED FOR ACTION


Private
50%



Public
50%

COMMENTS:

During the interview process, supporting the energy transition, particularly enabling the oil and gas sector to leverage on expertise and ensure a just transition, was the 4th most common need for action in the short term. Transitioning the oil and gas sector was also ranked as the most commonly cited risk for Canada. Both results point to the importance of Recommendation 12, as well as to the fact that there has been only marginal progress, suggesting there is still much to do with this very complicated issue. The bullets below highlight some of the progress that has been made since 2019:

- In April 2020, a \$750-million Emissions Reduction Fund was announced to reduce methane and GHG emissions in the oil and gas industry. This fund provides primarily repayable funding to eligible onshore and offshore oil and gas firms to support their investments to reduce GHG emissions by adopting greener technologies.⁶²
- Within the same announcement, the federal government stated intentions for up to \$1.72 billion in funding, including funding to the governments of Alberta, Saskatchewan, and British Columbia, and the Alberta Orphan Well Association, to clean up orphan and/or inactive oil and gas wells.⁶³
- The Government of Canada has a commitment in place to reduce methane emissions from the oil and gas sector by 40-45% below 2012 levels, by 2025.⁶⁴
- Of the 20 Canadian energy firms publicly traded on the S&P/TSX Composite Index, 12 (60%) have existing emission reduction targets.⁶⁵
- The Canadian government has committed to phasing out “inefficient fossil fuel subsidies” by 2025.⁶⁶ According to the International Institute for Sustainable Development (IISD), federal fossil fuel subsidies reached at least \$600M in 2019,⁶⁷ jumping to at least \$1.91 billion in 2020, although the majority of this increase is attributed to measures announced in the wake of COVID-19.⁶⁸
- CPA Canada has recently published a “Consultation Report on the Canadian Energy Sector’s Transition to Net-Zero” with the aim to identify critical gaps in order to achieve a unified national position that will enable Canada to thrive in the low-carbon transition and remain globally competitive in the net-zero economy.⁶⁹



- The Alberta Carbon Trunk Line (ACTL) system became operational in 2020. It represents a large-scale CCUS system, which was “designed as the backbone infrastructure needed to support a lower carbon economy in Alberta, the ACTL system captures industrial emissions and delivers the CO₂ to mature oil and gas reservoirs for use in enhanced oil recovery and permanent storage.”⁷⁰ It represents the world’s largest capacity pipeline for CO₂ from human activity, and can transport “up to 14.6 million tonnes of CO₂ per year, representing approximately 20% of all current oil sands emissions.”⁷¹
- In June of 2021, Pembina Pipeline Corporation and TC Energy Corporation announced plans to jointly develop a world-scale carbon transportation and sequestration system that will be capable of transporting more than 20 million tonnes of CO₂ annually, based on leveraging existing pipelines and a newly developed sequestration hub, the Alberta Carbon Grid.⁷²
- In June 2021, companies operating approximately 90% of Canada’s oil sands production announced plans to achieve net-zero GHG emissions from oil sands operations by 2050. The Oil Sands Pathway to Net-zero initiative is comprised of Canadian Natural Resources, Cenovus Energy, Imperial, MEG Energy and Suncor Energy.⁷³

Recommendation 9 10 11 12 13 14 15

Accelerate the development of a vibrant private building retrofit market.

PROGRESS – MARGINAL

need to follow up and capitalize


REMAINING NEED FOR ACTION


Private
40%



Public
60%

COMMENTS:

During the interview process, building retrofits was tied as the 4th greatest opportunity for Canada, which is consistent with the ISF's Capital Mobilization plan, which noted that retrofits represented the lowest hanging fruit in terms of Canada achieving its 2030 Paris agreement emission reduction targets. There has been marginal progress on this recommendation and implementation continues to lag:

- In September 2020, the Task Force for a Resilient Recovery published its recommendation report, which proposed \$27.25 billion in government investment over five years in climate-resilient and energy-efficient buildings.⁷⁴
- In October 2020, \$2 billion in funding directed towards building retrofits through the Canada Infrastructure Bank was announced.⁷⁵ Following the announcement, in March 2021, CIB published details surrounding the retrofit funding eligibility requirements.⁷⁶
- In October 2020, Efficiency Canada published "Strengthening Canada's Building Code Process to Achieve Net-Zero Emissions."⁷⁷
- In November 2020, it was announced that under the Greening Government Strategy, all new federal buildings (including build-to-lease and public-private partnerships) will be net-zero carbon and require a climate change risk assessment incorporating both current and future climate conditions.⁷⁸
- Budget 2021 includes \$4.4 billion in funding to the Canada Mortgage and Housing Corporation (CMHC) to assist homeowners complete deep home retrofits through interest-free loans of up to \$40,000.⁷⁹
- In April 2021, Indigenous Clean Energy (ICE) published "The Value Proposition for Financing Energy Efficient Homes in Indigenous Communities Canada-Wide."⁸⁰
- On July 14, 2021, the Toronto City Council approved a Net-zero Existing Buildings Strategy as part of achieving the City's Transform TO goal to reduce community-wide emissions to net-zero by 2050 or sooner.⁸¹

Recommendation 9 10 11 12 13 14 15

Align Canada's infrastructure strategy with its long-term sustainable growth objectives and leverage private capital in its delivery.

PROGRESS – MARGINAL

key priority


REMAINING NEED FOR ACTION


Private
50%



Public
50%

COMMENTS:

During the interview process, taking advantage of infrastructure was the 3rd most recurring theme mentioned by interviewees. There has been some progress on this recommendation, but much more needs to be done, particularly in terms of unlocking private sector investment in Canada's net-zero transition:

- On October 1, 2020, Prime Minister Justin Trudeau announced \$10 billion in new major infrastructure initiatives through the Canada Infrastructure Bank (CIB).
- Following up on this announcement, on March 4, 2021, the federal government announced \$2.75 billion in funding over five years, starting in 2021, to enhance public transit systems and switch them to cleaner electrical power, including supporting the purchase of zero-emission public transit and school buses.⁸²
- The CIB maintains a target to invest \$1 billion in Indigenous infrastructure projects across its five priority sectors: Clean Power; Green Infrastructure; Public Transit; Broadband; and, Trade & Transportation.⁸³
- In July 2021, Transport Canada, Infrastructure Canada, Finance Canada, and the CIB announced progress on plans to develop a high frequency rail line from Toronto to Quebec City, connecting Toronto, Ottawa, Montreal and Quebec City.⁸⁴
- On July 29, 2021, Infrastructure Canada released "Recommendations for Moving Forward on Canada's First National Infrastructure Assessment."⁸⁵

Recommendation 9 10 11 12 13 14 15

Engage institutional investors in the financing of Canada’s electricity grid of the future.

PROGRESS – MINIMAL

lots of room to go



REMAINING NEED FOR ACTION



Private
50%



Public
50%

COMMENTS:

During the interview process, supporting the energy transition was the 4th most frequently cited short term need for action, while developing a North-South electricity grid was rated as the 8th greatest opportunity. Unfortunately, despite much talk, there has been limited progress on developing a sustainable and efficient electricity grid for Canada.

- In May 2020, the Northeast Electrification and Decarbonization Alliance and HEC Montreal published a report on Northeast USA-Canada Decarbonization.⁸⁶ The report provides the perspective that deeper regional integration in the electricity sector across the North American Northeast can bring substantial emission reductions through the deployment of renewable energy.
- On April 13, 2021, the CIB and ITC Investment Holdings (ITC) signed an agreement in principle to invest \$1.7 billion in a Lake Erie Connector project. The project is a proposed 117 km underwater transmission line connecting Ontario with the PJM Interconnection, the largest electricity market in North America.⁸⁷
- NRCan’s Smart Grid Program, which was launched in 2018, is allocating funds of \$100 million over four years to utility-led projects to reduce GHG emissions, better utilize existing electricity assets and foster innovation and clean jobs.⁸⁸
- On June 2, 2021, NRCan launched “The Smart Renewables and Electrification Pathways Program” (SREPs), a \$964 million program to support renewable energy and grid modernization projects that will lower emissions.⁸⁹
- On July 14, 2021 Transition Accelerator launched “Canada Grid,” a new initiative focused on accelerating electricity grid integration to Power Canada’s Net-Zero Future.⁹⁰

B. Summary of Interviews

This section discusses the highlights of the 34 interviews we conducted with various sustainability and sustainable finance experts from across Canada, including three of the four members of the Canadian Expert Panel on Sustainable Finance. The list of interviewees can be found in Exhibit 1 at the end of this report. The experts were chosen to provide diverse perspectives on the numerous sustainable finance issues facing Canada today.

One of the striking observations that arose from the interviews is that the CEP clearly hit the nail on the head in terms of identifying key issues, since almost all the topics came up during our conversations. Unfortunately, lack of progress on many of the issues that were addressed in the recommendations was a recurring theme, which indicates that we still have to move quickly and decisively on many of these issues to implement these suggestions.

Overall, the interviews provided support for the conclusions of our landscape review in Section A in terms of progress towards achieving specific recommendations. They also provided additional insights regarding the perceived importance and potential impact of making progress with respect to several of the recommendations, as well as painting a broader picture of key sustainable finance issues in Canada.

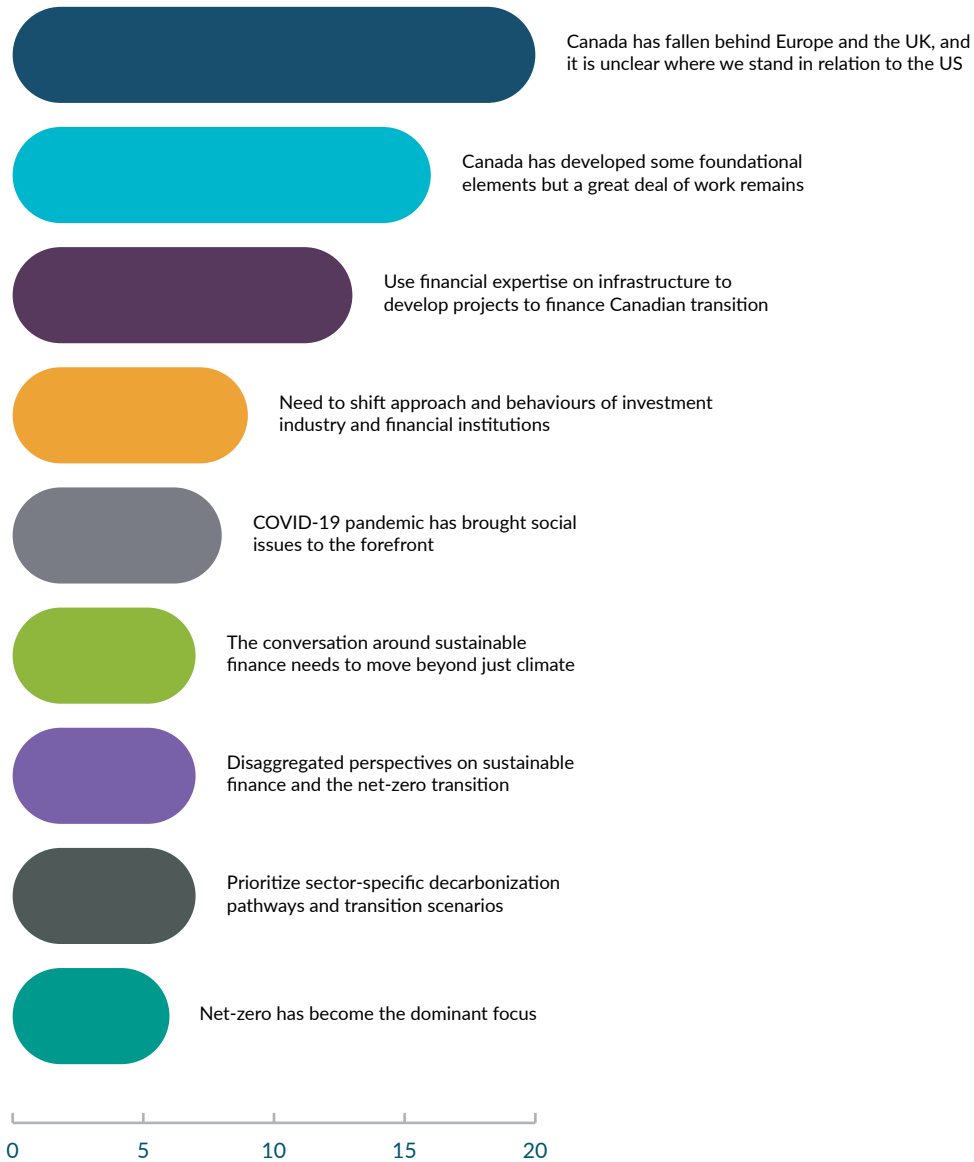
We have organized our discussion of the interviews into four categories: main recurring issues and themes; potential needs for short-term action; key opportunities; and key risks and impediments.


MAIN RECURRING ISSUES AND THEMES

Figure 2 depicts the nine most frequently referenced sustainable issues throughout the interviews and notes the number of times a particular issue was referenced by interviewees. We discuss each of these issues in order of the number of times they were referenced.

FIGURE 2:

Main Recurring Themes and Concerns





Canada has largely fallen behind Europe and the UK, and it is unclear where we will stand in comparison to the United States.


Many interviewees felt that Europe and the UK have been setting the tone in terms of discussions and actions related to sustainable finance issues and that Canada remained relatively neutral during the Trump Administration in the US. This leaves us playing catch-up as it is clear that the Biden Administration will be moving very quickly. The general consensus among interviewees was that the private financial sector has been moving faster than government, particularly with regard to the important foundational elements of disclosure and fiduciary duty.

“A notable takeaway for the Expert Panel was Canada’s trailing progress relative to other peer jurisdictions in mobilizing sustainable finance with purpose and coordination. Canada has the financial acumen and innovative capacity to be a model leader in transitioning a resource-rich economy toward a net-zero, climate-smart future. But it will require swifter action, determined investment and more committed alliance between business, government and civil society.”

Barb Zvan, President and CEO, University Pension Plan
Member of Canadian Expert Panel on Sustainable Finance

“Europe is way ahead...Canada is making the right noises and starting, but it really does feel, because we are risk-averse and resource-heavy, we are taking longer to start, and longer to catch up...and that is troubling.”

Pamela Steer, Advisory Board, Institute for Sustainable Finance



Canada has started to work on some of the foundational elements laid out in the Expert Panel recommendations necessary to accelerate sustainable finance, but there is still a great deal of work to do. Now it is time to execute.

Bill C-12, the Canadian Net-Zero Emissions Accountability Act, has passed in the House of Commons and the Senate and will now become law.²¹ This has firmly established the destination for Canada; however, the specific pathways necessary to arrive at this destination remain uncertain, particularly with respect to Canada’s oil and gas sector. The March 2021 Supreme Court of Canada ruling on the constitutionality of federal carbon pricing²² has established a robust precedent and sends a strong signal to market participants.

Many participants were encouraged by the establishment of the Sustainable Finance Action Council and the Net-zero Advisory Body. The role of these organizations could prove to be essential catalysts in Canada’s acceleration of sustainable finance. The creation of the Canada Infrastructure Bank (CIB) is largely seen as a positive development, but some remained skeptical regarding its effectiveness thus far.

“Historically, private industry was slower to get its head around sustainable finance, the academics and NGOs were ahead, government was slow...but I think the Expert Panel effort and the extensive engagement and outreach that supported the recommendations acted to a certain extent as a catalyst for some of the private thinking that had been missing.”

Kathy Bardswick, Chair, Sustainable Finance Action Council




Use of financial expertise to develop large infrastructure projects for net-zero transition in Canada

There has been some recent activity in the infrastructure space in Canada, with several developments discussed in Section A with respect to Recommendation 14. For example, based on recent information from the CIB website, the Bank is now participating in 23 projects.²³

However, despite several positive signs, interviewees were virtually unanimous regarding the lack of attractive and financeable infrastructure projects to support net-zero transition within Canada. As a result, it was noted that many large Canadian institutional investors are deploying capital in other markets. With the infrastructure investment expertise that is housed within Canadian institutional investors there is a need to access this talent to come up with solutions for made in Canada investments.

“We have invested in BC and Canada, but not because it comes from a specific mandate...I think there continues to be opportunity for the Canadian Infrastructure Bank to provide leadership in fully engaging long term institutional capital such as ours in respect to developing infrastructure projects in the country.”

Jennifer Coulson, Vice President, ESG, British Columbia Investment Management Corporation



The need to shift the approach and behaviours of Canada’s investment industry and financial institutions

The Potential for Developing Canadian Battery and ZEV Supply Chains **CLEAN ENERGY CANADA AND THE TRANSITION ACCELERATOR**

A significant re-channeling of investments away from fossil fuel projects and towards the clean energy economy will be needed in the coming decades. Batteries—used to store clean electricity and power our future vehicles, buildings and industry—will be the lynchpin of this transition. According to the [International Energy Agency](#), the equivalent of 20 battery gigafactories must be built each year for the next ten years to meet the world’s net-zero emissions by 2050 target. This translates into a global battery market valued at over \$100 billion by 2030 and a 500% increase in demand for battery minerals like graphite, lithium, and cobalt by 2050. Right now, 80% of the world’s batteries are produced in Japan, South Korea, and China. In fact, the whole of the global automotive supply chain is facing significant disruption as a result of the push to electrification. With over 500,000 direct and indirect automotive sector jobs across the country, electrification represents both a significant threat and opportunity for Canada.

Fortunately, Canada is home to all the metals and minerals needed in the battery supply chain. Our track record of responsibly produced resources and abundant clean electricity to power low-carbon operations means we’ll be particularly competitive in a world increasingly looking for sustainable batteries and input materials. BloombergNEF has ranked Canada as 4th in the world for its battery supply chain potential, and the EU and US view Canada as a secure source of sustainable raw materials. Canada is also home to a number of globally competitive Zero Emission Vehicle (ZEV) companies, particularly in the medium to heavy duty space.

Developing Canada's battery-and the broader ZEV supply chain will help anchor our auto sector (second-largest export) and ensure that we capture the jobs and value created in the transition to electric vehicles. The federal government has acknowledged Canada's battery advantages and has taken initial steps to advance the industry. Recent investments supporting EV assembly in Ontario and battery module production in Quebec are putting Canada on the EV and battery map. Further commitments made in the 2021 federal budget and strategic investments by the Government of Quebec will help grow some parts of the supply chain and keep Canada moving in the right direction.

However, a recent report emerging from an industry roundtable convened by Clean Energy Canada has revealed that the efforts to-date are insufficient given the scale of this opportunity and the speed at which other countries are moving to capture it. For instance, in 2017, the EU established the European Battery Alliance, which has dedicated over €6 billion to building the region's supply chain. Already the EU has over 15 large-scale battery-cell factories under construction. President Joe Biden's infrastructure bill earmarks \$6 billion for battery materials processing and manufacturing projects, with another \$140 million allocated for a rare earths demonstration plant.

The window of opportunity to enter the battery market and to help our broader sector compete in the ZEV space is now, and more is needed to support the build-out of Canada's domestic industry. In short order, Canada needs to develop an action plan to expand and promote its clean-battery advantage and an ambitious industrial road map to support the automotive sector's transition to ZEV production. Building on this, Canada must work with the U.S. to launch a North American Battery Alliance to compete with the ambitions of Asia and Europe. The federal and provincial governments also need to work with the broader industry and labour unions to develop and launch a strategy to attract investment and ensure Canada remains a key player in future global automotive market.


Several interviewees noted that there is a challenge with respect to adjusting the Canadian financial institutions' processes, in order to fund smaller projects, and to be increasingly more agile than the "old" system, which was based on large and less distributed projects.

"I think that Canada having a very large pension fund like CPPIB, we have the resources, and the expertise of a long-term investor who can take on more risk of undergirding transition technologies, companies, and industries... We haven't necessarily seen CPPIB doing that to any significant extent, but that is a role they could play in Canada...as it's an enormous pool of long-term finance, that if allocated to that task, it could be a real advantage to the economy and ultimately to Canadians."

Cynthia Williams, Osler Chair in Business Law, Osgoode Hall



COVID-19 has brought social issues to the forefront.



The conversation around sustainable finance needs to move beyond just climate.

Numerous interviewees noted that the COVID-19 pandemic has resulted in social issues coming more to the forefront – specifically Indigenous reconciliation in Canada, and diversity, equity, and inclusion. Relatedly, many interviewees identified the need for sustainable finance conversations to extend beyond climate, because of the importance of social issues, and due to the interconnection between climate change, economic prosperity, and social issues in many instances.

Diversity, Equity and Inclusion (DEI) issues have risen to the forefront with the impacts of COVID-19 being felt unequally across communities. Public and private sector organizations are expected to demonstrate intention, attention, dedicated-demonstrable inclusion practices and zero tolerance. National securities Instrument 58-101 Disclosure of Corporate Governance Practices has a diversity and disclosure requirement in place, and amendments to the *Canada Business Corporations Act* effective January 2020 requires corporations governed by CBCA with publicly-traded securities to provide diversity disclosure regarding women on the board and senior management consistent with requirements under Canadian securities laws, and corresponding disclosure respecting Indigenous persons, members of visible minorities, and persons with disabilities.

Efforts to implement the recommendations by the Truth and Reconciliation Commission continue and the federal government and province of British Columbia have enacted legislation to enshrine Canada's commitment to the UN Declaration on the Rights of Indigenous Peoples and develop action plans. Private sector businesses and the financial sector are also looking to increase partnerships and equity investment opportunities in projects with Indigenous people. There is a great deal of work still required.

Biodiversity issues must also be addressed. In its 2020 Global Risks Report, the World Economic Forum (WEF) rated biodiversity loss and ecosystem collapse as one of the top five risks over the next 10 years.²⁴ The WEF further estimates that more than half of the world's economic output is moderately or highly dependent on nature. Statistics like these demonstrate the high dependency of the global economy on nature, indicating a need for nature-related data. It is with this need in mind that the Taskforce on Nature-related Financial Disclosures (TNFD) was formed with the intention of providing “a framework for organisations to report and act on evolving nature-related risks, to support a shift in global financial flows away from nature-negative outcomes and toward nature-positive outcomes.”²⁵

“What's really changed has been the participation and involvement of Indigenous communities in infrastructure projects...the intersection of the 'E' and the 'S' in the sustainable finance agenda”

Lindsay Patrick, Managing Director and Head, Sustainable Finance, RBC

“There is some confusion around the concept of sustainable finance...we need a common definition and to have it include Indigenous perspectives. Indigenous issues are limited to the “S” in ESG. Indigenous worldviews permeate across all 3 pillars – Environmental, Social and Governance.”

Hillary Thatcher, Senior Director
Project Development Indigenous Infrastructure, Canada Infrastructure Bank



A largely disaggregated mosaic of perspectives on sustainable finance and the net-zero transition in Canada

Many interviewees noted problematic intra-federal and inter-provincial communication issues, as well as a lack of engagement with market participants. The consensus was that there is a need to establish a more centralized voice and perspective for the country, as well as strengthened communication channels. Many interview participants expressed hope that the recently established Sustainable Finance Action Council (SFAC) could play an important role in bridging the gap between the Canadian public and private sectors on sustainable finance.

“That notion of public sector and private sector getting in a room to figure things out...to me, this is the only way it is going to work.”

Andy Chisholm, Board Director, RBC
Member of Canadian Expert Panel on Sustainable Finance

“To transition to net-zero and develop a more competitive and sustainable economy, the public and the private sector will need to work together more coherently and cooperatively.”

Tiff Macklem, Governor, Bank of Canada
Member of Canadian Expert Panel on Sustainable Finance



Establishing sector-specific decarbonization pathways and transition scenarios within a Canadian context

Firms and investors are rapidly setting net-zero targets without clear pathways to achievement. Many interviewees believe that both the investment and corporate community are struggling with this element. Many identified the importance of the pilot project in process by OSFI, the Bank of Canada, and several Canadian financial institutions to use climate change scenarios relevant to Canada to better understand the risks to the financial system with respect to a transition towards a low-carbon economy.²⁶

Several interviewees also expressed optimism with respect to the role that the newly formed Net-Zero Advisory Body can play in establishing net-zero pathways. The Advisory Body will serve as an independent group of experts with a mandate to engage with Canadians and to provide advice to the Minister of Environment and Climate Change, the Prime Minister, and Cabinet to achieve net-zero emissions by 2050.²⁷

“The sooner stakeholders including government, industry, and scientists can align on sector decarbonization pathways... we'll have a clearer view of where we're headed, and the easier it will be to work together on solutions.”

Nicole Vadori, Head of Environment, TD Bank



Net-zero has become the dominant focus of sustainable finance since the Expert Panel Recommendations were released two years ago.

Bill C-12, the *Canadian Net-Zero Emissions Accountability Act* was passed in June 2021, in the House of Commons and the Senate and will now become law.²⁸ This has firmly established the destination for Canada; however, the specific pathways necessary to arrive at this destination remain uncertain. Many industry participants are encouraged by the establishment of the Net-zero Advisory Body (NZAB) and their focus on recognizing the difference between incremental changes and net-zero. The NZAB can provide the direction and the SFAC can develop the solutions for financing Canada's transition to net-zero; however, execution by both the private and public sectors will determine the results.

“Net-zero commitments are going to drive some faster action. Corporates and governments, once they've made these commitments public... will need to operationalize them... we've never been able to make our pathway in Canada to date...the bigger question is what is going to change?”

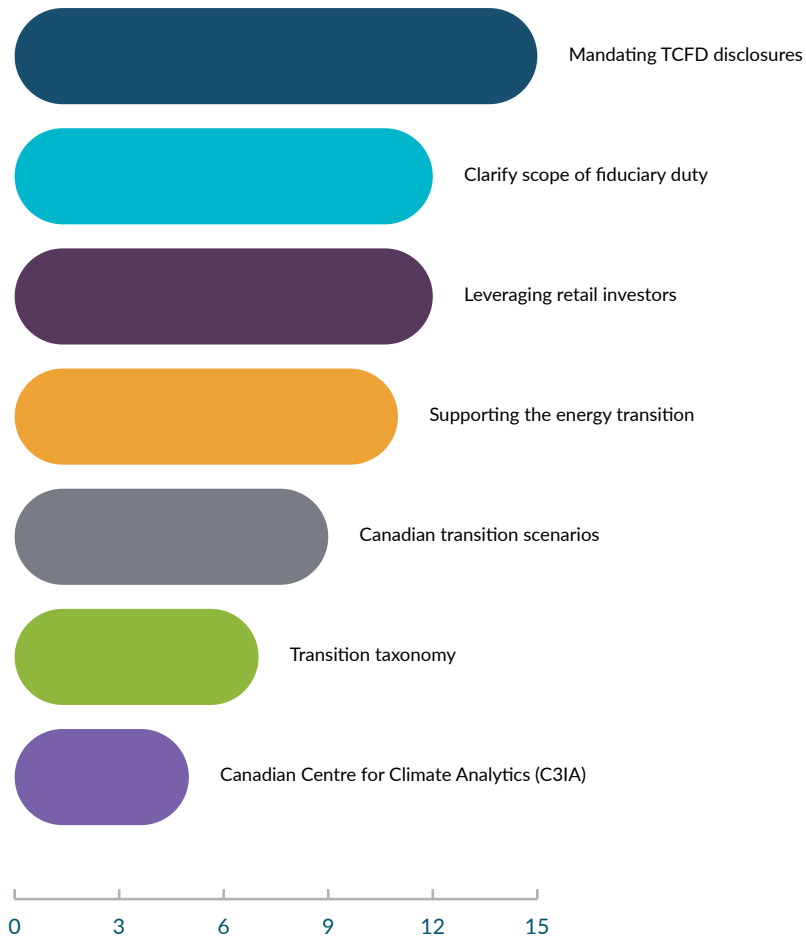
Martin Grosskopf, VP, Portfolio Manager and Director, Sustainable Investing, AGF


POTENTIAL NEEDS FOR ACTION TO BE FOCUSED ON IN THE NEAR TERM

The key items identified in order to move forward on sustainable finance over the near term are depicted below. In particular, Figure 3 identifies the seven most frequently referenced potential needs in the near term. We discuss each of these in order of the frequency in which they were mentioned during the interviews.

FIGURE 3

Potential needs for action to be focused on in the near term





Mandating disclosures in alignment with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations

Recommendation 5 was recognized as the most important initiative to advance in the near term in order to catalyze further market developments, with almost half of interviewees mentioning the importance of mandating TCFD disclosures. The noted importance of this issue is consistent with the November 2020 joint statement issued by the CEOs of Canada's eight largest pension plan investment managers, expressing support for companies and investors to provide "consistent and complete" ESG information by leveraging the SASB and TCFD frameworks.⁹²

Progress has definitely occurred in terms of disclosures over the past two years. For example, according to a Milani study, as of 2020, 71% of S&P/TSX Composite Index issuers prepared dedicated ESG reports, versus 58% in 2019 and only 36% in 2016, while 56% of these companies reported in alignment with the SASB guidelines, up from 36% in 2019, and only 6% during 2018.¹⁰⁰ With respect to TCFD reporting, and as noted previously, by August of 2021, there were 94 Canadian TCFD Supporters, including 59 financial institutions,¹⁰¹ while Milani indicates that during 2020, 42% of S&P/TSX Composite Index issuers reported in alignment with the TCFD recommendations, up from 30% in 2019. While Canada is not alone in making slow progress on sustainability reporting, the G7 has stated support for mandatory disclosures in alignment with the TCFD recommendations,¹⁰² while New Zealand and the UK have announced legislation to make TCFD aligned reporting mandatory.¹⁰³

"I go back to company disclosures...it's going to be a journey. We need to standardize non-financial reporting for all corporations so we can all have reliable data and insights to develop sustainable investment products; the inconsistency in non-financial or ESG data makes it difficult for us to have reliable insights."

Fate Saghir, Senior Vice President, Sustainable Investing, Mackenzie Investments



Clarifying the scope of fiduciary duty

Recommendation 6, clarifying the scope of fiduciary duty, was widely recognized as a crucial initiative to act on in the near term. Despite many market participants widely recognizing that it is a fiduciary obligation to consider the implications of climate change risk, some remain hesitant. There is a gap in understanding and practice. Legal opinions and market forces have largely steered this conversation as discussed in Section A regarding Recommendation 6. However, the government and relevant regulatory bodies have remained relatively quiet on the topic.

"I think one of the areas from the asset manager and investor side that still remains a challenge is the lack of clarity around what are the duties around the consideration of ESG factors in the investment process. Particularly on the asset owner side – pensions are looking for clarification."

Margaret Childe, Head of ESG, Canada, Manulife Investment Management

"On clarifying the scope of fiduciary duty and climate change...Recommendation 6.1 – on the public statement...we can make that now...we have so much research behind that point...I don't think that's going out on a limb at all."

Catherine McCall, Executive Director, Canadian Coalition for Good Governance

Engaging the public and leveraging the retail investor base

Leveraging Canada's Retail Investor Base to Drive Sustainability **THE RESPONSIBLE INVESTMENT ASSOCIATION**

Canadian retail investors have been piling into responsible investments (RI) that incorporate environmental, social and governance (ESG) criteria. Data from Morningstar shows that a staggering \$3.3 billion in assets flowed into retail ESG products in 2020, more tripling the figure for 2019. This growth is driven by investor demand and a greater supply of products with a focus on sustainability. In 2020 alone, Canadian fund companies launched 41 new mutual funds and exchange-traded funds (ETFs) with an ESG or sustainability focus. Another 26 were launched in the first half of 2021. So, with record assets flowing into a rapidly growing landscape of ESG products, there is clearly strong growth occurring in Canada's retail market for responsible or sustainable investments.

While this growth is positive and exciting to see, there is still a long way to go. According to the Investment Funds Institute of Canada (IFIC), there are approximately \$2 trillion in assets held in Canadian-domiciled mutual funds, and just north of \$300 billion in ETFs. Only \$26 billion or roughly 1% of those assets are invested in mutual funds and ETFs that are marketed as sustainable or responsible, according to Morningstar. So, sustainability-focused funds are still a drop in the bucket within the Canadian retail market.

However, the recent momentum points to tremendous upside potential. Mobilizing the retail market could unlock some \$2 trillion for sustainability.

Closing the Gap Between Investors and Advisors

The 2020 RIA Investor Opinion Survey, which is based on an Ipsos poll of 1,000 Canadian retail investors, found that 75% of respondents would like their financial advisor to inform them about responsible investments, but only 28% had ever been asked if they're interested in RI options. So, nearly half (47%) of respondents are interested in RI but not being served. This illustrates a major gap between investors and advisors.

The Responsible Investment Association (RIA) is working to close that gap by providing education for advisors and engaging with regulators. On the education front, approximately 2,000 professionals have enrolled in the RIA's education program for retail advisors.

And on the regulatory front, the RIA has sent engagement letters to the Mutual Fund Dealers Association (MFDA) and the Investment Industry Regulatory Organization of Canada (IIROC) to advocate for ESG to be part of the Know-Your-Client (KYC) process. The RIA has proposed policy amendments that would encourage advisors to consider that their clients may have investment objectives that focus on ESG or sustainability preferences, and that advisors should seek to gain an understanding of these preferences. The RIA points to existing regulations in Australia and Europe to show that this is not a novel concept. Acceptance of these proposed amendments would be a major catalyst for responsible investing in Canada's retail market.

Conclusion

There is very strong growth of ESG or responsible investing occurring in Canada's retail market, but there is still a long way to go as assets in ESG-focused funds still only make up a small portion of the total market for mutual funds and ETFs.

Many investors are interested in sustainability but are underserved by their advisors. As a result, the RIA is delivering ESG education for retail advisors and engaging with regulators to position clients' sustainability preferences as potential investment objectives that advisors should investigate. An advisor base that is educated about ESG and a regulatory framework that encourages advisors to assess their client's sustainability preferences would go a long way to unlocking some \$2 trillion for sustainability-focused investing in Canada's retail market.

Engaging the public and leveraging the retail investor base was tied as the second most frequently cited short-term need for action. This comment is closely related to Recommendation 2, to provide Canadians the opportunity and incentive to connect their savings to climate objectives. Unfortunately, interviewees felt that this has largely been untapped. Many felt that offering increased contribution space and a "super tax deduction" for contributions to registered retail savings plans earmarked for accredited climate-conscious products, would prove to be an extremely impactful initiative. However, based on current public knowledge, no progress has been made on this initiative to date.

"There doesn't seem to be a lot of market demand from the general public...we hear generally around clients where they indicate the importance of sustainability to their values, but we're not seeing this translate yet into certain portions of the market, or with clients more broadly."

Alanna Boyd, Senior Vice-President, Chief Sustainability Officer, Sun Life Financial

Supporting the energy transition

Supporting the energy transition, and the oil and gas sector in particular, was the 4th most commonly cited need for immediate action. Several of the responses were nested in relation to the International Energy Agency's (IEA) recent report, "Net-zero by 2050: A Roadmap for the Global Energy Sector," which states that in a net-zero scenario, gas demand would decline 55% to 1,750 billion cubic metres and oil demand would decline by 75% to 24 million barrels per day (mb/d) by 2050, from around 90 mb/d in 2020.¹⁰⁴

We noted several areas of progress in this regard in Section A in our discussion of Recommendation 12. Unfortunately, the general consensus is that while some progress is in motion, we are simply moving too slow on this front. Several interviewees mentioned that transition bonds could be an important financing mechanism for the transitioning of the oil and gas sector, and look forward to the transition taxonomy currently being developed by the CSA Transition Taxonomy Technical Committee.

"We need to come to grips with where the capital is needed to make the biggest gains in emission reductions...this is the challenge Canada is struggling with...how to create 200 megatons of reductions...well, one of the best opportunities is to work with the oil and gas industry to develop and scale technologies that can help do that It could require 10s of billions of dollars, and we need to determine where that best comes from"

John Stackhouse, Senior Vice President, Office of the CEO, RBC



Canadian transition scenarios

Please refer to the discussion following Figure 2 “Main recurring themes and issues”, item “Establishing sector specific decarbonization pathways and transition scenarios within a Canadian context.”



Transition taxonomy

As discussed in the item above (“Supporting the energy transition”), many interviewees mentioned the potential importance of the forthcoming transition taxonomy that is under development.

“There are all the right signals, but the reality of creating investing at scale is still challenging. The challenges of creating a transition finance taxonomy that reflects the realities of Canada’s economy, and is accepted by the international investing community, demonstrates the complexity.”

Karen Clarke Whistler, Principal, ESG Global Advisors



Canadian Centre for Climate Analytics (C3IA)

As mentioned in Section A with respect to Recommendation 4, several interviewees mentioned the importance of improving sustainable finance and climate data, and in particular the creation of the Canadian Centre for Climate Analytics (C3IA), or something along those lines.

“The cries for more data is a bit of a red herring, there is a lot of data out there, but it’s not very accessible, in context, for decision-usefulness.”

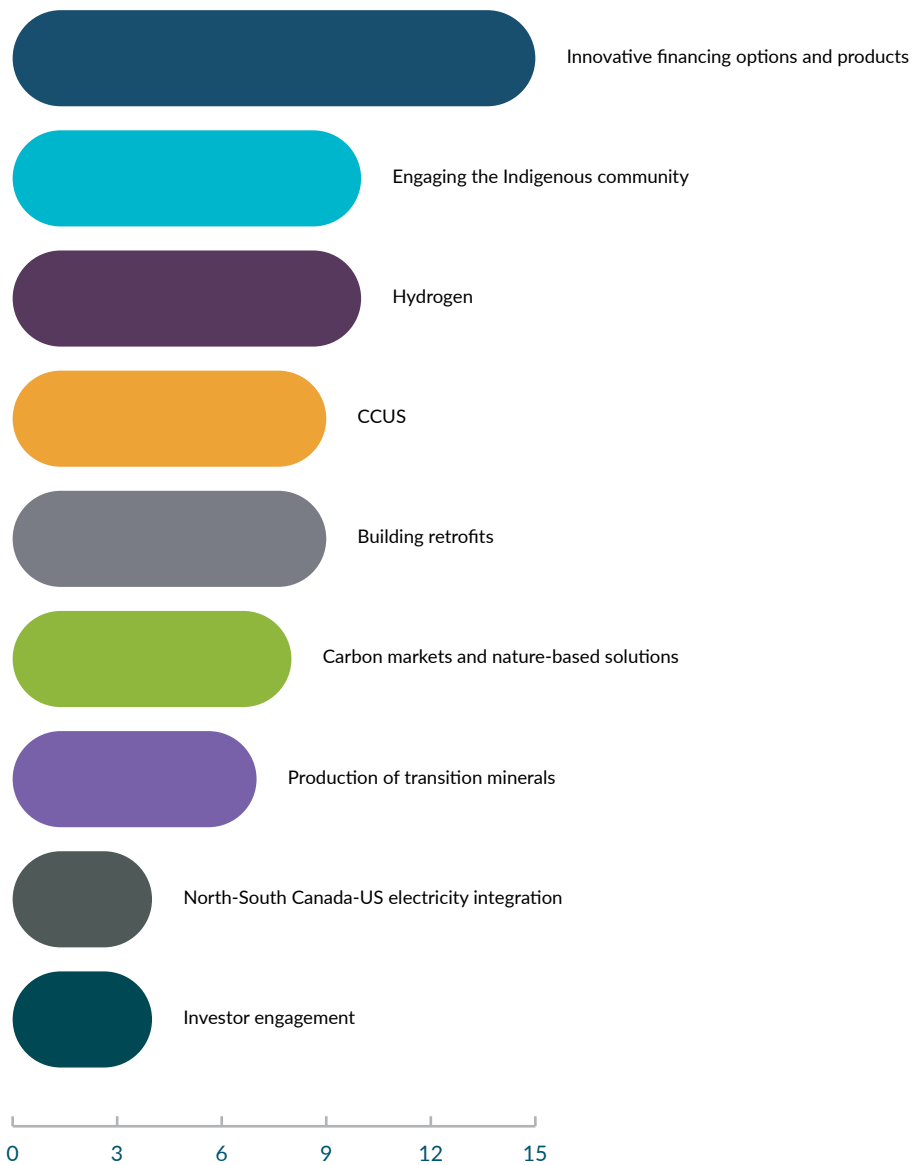
Laura Zizzo, Co-Founder and CEO, Manifest Climate

KEY OPPORTUNITIES

Figure 4 identifies the nine most frequently referenced key opportunities for Canada. We discuss each of these in order.

FIGURE 4

Key Opportunities





Innovative financing options and investment products

The most frequently cited key opportunity for Canada was the development of innovative financing options and investment products that could be crucial drivers of impact from an emissions reduction perspective, as well as in terms of social impact and economic development. While there has been significant growth in investments that integrate sustainable finance considerations, the consensus was that there is currently a general lack of financing options for Canadian cleantech firms.

“Often in finance we feel there's a trade-off between stability and efficiency. In this case, I think the two are reinforcing. The more efficiently the financial system channels capital to sustainable investments, the more stable the financial system is going to be, as it supports the transition to low-carbon growth.”

Tiff Macklem, Governor, Bank of Canada
Member of Canadian Expert Panel on Sustainable Finance



Engaging the Indigenous community

Engaging the Indigenous community tied as the second most frequently cited opportunity for Canada. Interviewees noted several important components of this engagement. The inclusion of Indigenous communities and perspectives on large infrastructure and natural resources projects within Indigenous territories will be essential for obtaining a social license to operate. There is also an important need to get transmission to provide power to Indigenous communities and to end reliance on diesel fuel. Interviewees also noted that Arctic specific issues are very relevant for Canada, and that Indigenous communities want equity ownership in projects.

Integrating Indigenous perspectives in Canada's transition towards a net-zero economy will be an important piece in reconciliation. Truth & Reconciliation Commission Call to Action 92 calls upon the corporate sector in Canada to adopt the United Nations Declaration on the Rights of Indigenous Peoples and to apply its principles, norms, and standards to corporate policy and core operational activities involving Indigenous peoples and their lands and resources.¹⁰⁵ On May 15th, Bill C-15, the United Nations Declaration on the *Rights of Indigenous Peoples Act* was adopted, and has received Royal Assent. The Act will soon become law.¹⁰⁶

“When I look at these portfolios from an Indigenous perspective, they are not very good. Greenwashing at a big asset allocator level is an issue...If the Indigenous community can be put at the front and center of some of these products, that would be great – there are very few true ESG like funds that really understand and measure impact on the ground.”

Jeff Cyr, Managing Partner, Raven Indigenous Capital Partners

“Not to be underestimated is Indigenous relations. The inclusion of Indigenous voices is huge for Canada...many Indigenous groups have not been treated fairly, and I think we are on the cusp of a new chapter for Canada.”

Milla Craig, Founder and President, Millani

Low-carbon hydrogen and CCUS: Enabling a net-zero world **THE TRANSITION ACCELERATOR**

The Expert Panel on Sustainable Finance's final report references hydrogen and carbon capture utilization and storage (CCUS) as promising innovations. Since then, there has been significant progress made in these spaces with the release of the federal government's [Hydrogen Strategy for Canada](#), the [launch of Canada's first hydrogen HUB](#) and recent high-profile hydrogen project announcements, such as [Air Products' multi-billion dollar plan](#) to build a net-zero hydrogen energy complex in the Edmonton Region.

Low-carbon hydrogen is a vital component of the future clean energy system. The Hydrogen Strategy for Canada projects that it could deliver up to 30% of Canada's end-use energy by 2050. Although economy-wide electrification is the primary solution to reach net-zero by 2050, some sectors are not well-suited to electrification. For instance, low-carbon hydrogen is the fuel of choice to decarbonize heavy freight and transportation (e.g. heavy trucks, trains, ships and planes) because the weight of the batteries needed to move heavy vehicles simply is too great for efficient transport.

Canada is also one of the lowest cost places to make low-carbon hydrogen in the world, giving us a global competitive advantage and the opportunity to become a leading hydrogen producer, user and exporter. For instance, "green" hydrogen (made through the electrolysis of water) can be made in Canada for about the same price as wholesale diesel and "blue" hydrogen (made by upgrading natural gas paired with carbon capture storage and use (CCUS)) can be made for about half the wholesale cost of diesel. Canada has world-leading experience in CCUS as well as amenable geology to permanently store carbon. Of course, no matter how hydrogen is produced, its carbon intensity is what is most important, and it is essential to measure full lifecycle carbon intensity in real time and have the intensity verified by a third party.

Since the production of blue hydrogen requires the same, skills, talent, infrastructure and natural resources traditionally used in the oil and natural gas sector, it also offers a significant opportunity to ensure a just transition for workers. Development of hydrogen can help support the industry in building a low-emissions, globally competitive future, as was recommended in the Expert Panel's report.

To realize these opportunities, capitalize on Canada's competitive advantage and become a low-carbon hydrogen leader, Canada must act now. The world is moving quickly and the race to become a hydrogen exporter is on, with countries like Australia and Saudi Arabia already making hydrogen shipments to Japan. To ensure we're acting quickly to take advantage of this opportunity, The Transition Accelerator is working with stakeholders to set up hydrogen HUBs, which are designed to accelerate the development of regional hydrogen economies in locations across the country with the development of hydrogen fuel markets which will drive investment in the production of low-cost, low-carbon hydrogen. These HUBs will later be connected to others across Canada to break the cycle of insufficient hydrogen supply and demand, and achieve sufficient scale for a strong Canada-wide hydrogen economy while troubleshooting any issues and de-risking investment.

Development of hydrogen tied as the second most frequently cited opportunity for Canada. Interviewees noted some progress being made and noted the importance of not letting this opportunity pass us by. For example, the hydrogen sector has the potential to create domestic market revenue of up to \$50 billion per year by 2050, while internationally, the demand for hydrogen is expected to reach \$2.5 trillion by 2050.¹⁰⁷ The discussion of progress on Recommendation 11 in Section 1 mentions several areas of progress in this regard including NRCan's announcement of a Hydrogen Strategy for Canada in December 2020.

“An opportunity here is that you can make hydrogen from fossil fuels in a way where the carbon intensity can be about the same, or in some cases lower, than the carbon intensity of hydrogen made by electrolyzing water. There is a path forward to use our fossil fuel resources in a way that is compatible with a net-zero world. Using hydrogen to decarbonize heavy transport/industry or buildings that are difficult to address scope 3 emissions, it is an option for us, but Canadian companies have not fully embraced this yet.”

Dan Wicklum, President and CEO, Transition Accelerator



Carbon capture, utilization, and storage (CCUS)

Many interviewees identified CCUS as an important technology that needs to be developed and implemented in order to assist in decarbonizing Canada's energy and heavy industry sectors. It was felt that, as a global leader in responsible fossil fuel development, Canada has a significant opportunity to export these technologies globally in support of the low-carbon transition.

“Carbon Capture and Storage — hidden secret that there is tremendous momentum in innovation, costs are coming down. Expertise in Canada and resources that we have to do it are all here. You want to reduce emissions fast; it should be an area of focus.”

Peter Tertzakian, Deputy Director, ARC Energy Institute



Building retrofits

Energy Efficiency as Infrastructure — Building Retrofits **EFFICIENCY CANADA**

The Expert Panel recommended the need to “Accelerate the development of a vibrant private building retrofit market.” It identified the opportunity of deep energy retrofits as one of the most economical means to improve Canada's carbon footprint and resiliency to climate impacts.

Buildings account for almost 18% of Canada's total GHG emissions and to transition to a net-zero emissions economy, there is a need to rethink energy efficiency from the traditional building-by-building approach to one where we are concerned with large-scale, aggregate impacts of improving energy efficiency. This includes GHG emissions from buildings directly, as well as freeing up our existing clean electricity resources to be used for further GHG reductions in areas like transportation and industry.

To reach this type of scale of energy retrofits there needs to be the creation of a functioning market for deep energy savings — where customers can access stable bills, comfort, and indoor air quality benefits that come with energy efficiency in the same way that they can pay for a cell phone plan or lease a car. That convenience on the customer end exists because you have private investors ready to back particular business models and buy portfolios of smaller loans.

Today, private investors are not directing their capital towards substantial energy upgrades because the necessary market structures haven't been created. Investors see high transaction costs for each retrofit project and do not have the data to accurately assess investment risk.

Two opportunities for pursuing Energy Efficiency as Infrastructure are as follows.

1. **Canada Infrastructure Bank (CIB):** The CIB growth plan released at the end of 2020 includes building retrofits with a focus on large-scale, non-residential buildings. This is a “market-creating” role with a goal to direct capital into building retrofits as a new area for productive investment. Strategies to do this could include:
 - Taking the lead on investments and producing data to demonstrate the potential to the private sector.
 - Aggregating individual retrofit projects into larger portfolios that can attract attention of investors.
 - Promoting standardized energy saving measurement and evaluation protocols to reduce transaction costs and enable trade.
2. **Residential Retrofit Gap:** To reach our climate goals energy efficiency services need to be made available in the places people live. There is a need to go beyond the current approach of financing for homeowners or the individual home. Other jurisdictions are exploring the aggregation of residential retrofits to achieve economies of scale, as well as different business models where homeowners can sign a contract that guarantees home comfort and a stable bill, with a third party handling the financing. To see residential retrofits take-off, there is a need to develop new market structures and business models, and for innovations in manufacturing and logistics. This will require more than re-directing financial markets. Efficiency Canada has put together an analysis on how this could be developed in the report: [Canada's Climate Retrofit Mission](#).

Numerous interviewees identified the building sector, Canada's third-highest source of emissions, as a substantial opportunity. This is consistent with ISF's Capital Mobilization Plan for a Low-Carbon Canadian Economy, which identified the building sector as Canada's lowest-hanging fruit with regard to low-cost GHG reductions. Relatedly, accelerating building retrofits was viewed by many participants as a way to unlock large environmental and economic benefits and jobs. The discussion of progress on Recommendation 13 in Section 1 provides several examples of progress on this issue, but there remains much room to go.

“One of the great value-adds from the CIB is that there is a paradigm shift now, treating buildings as infrastructure...whereas before, infrastructure just meant the old way of doing things.”

Corey Diamond, Executive Director, Efficiency Canada




Carbon markets and nature-based solutions

Many interviewees noted that Canada's large geographical size and its expansive ecosystems position us well to provide opportunities for carbon offsets both domestically and to the international community. Some were encouraged by the March 2021 announcement of draft regulations to establish the Federal Greenhouse Gas Offset System.¹⁰⁸

Nature-based solutions (NBS) include activities such as protection, restoration, and improved land management. Such activities not only improve nature, but also contribute to the removal of greenhouse gasses from the environment. For example, a recent report by Nature United shows that "Natural Climate Solutions can reduce Canada's emissions by up to 78 megatonnes of CO₂e annually in 2030."¹⁰⁹ This amounts to over 10% of total Canadian emissions. In addition to being relatively cost-effective, NBS contribute to economic health by creating new jobs or revenue streams for society, including Indigenous communities.

"We have challenges with respect to fragmented carbon markets, and a need for scale and stability – California is a good example."

Jonathan Hackett, Managing Director and Head, Sustainable Finance, BMO



Canadian opportunity to become a global leader in the production of transition minerals

A 2020 World Bank report finds that the production of minerals, such as graphite, lithium, and cobalt, could increase by nearly 500% by 2050, to meet the growing demand for clean energy technologies.¹¹⁰ Many interviewees noted that the primary supplier countries of these minerals have weaker ESG performance than Canadian companies. For example, supply chains in some countries are often at risk of conflict issues, human rights abuses, unsafe working conditions, and child labour. It was felt that Canada has a unique opportunity to step in and be the responsible supplier of choice for many of these minerals. For example, relevant minerals and metals mined in Canada utilized in these clean energy supply chains include copper, cobalt, graphite, lithium, and nickel. With respect to the commodity pricing for these key minerals, current pricing trends and forecasts also support substantial economic opportunity.

"Regarding clean minerals for transition...we have ample resources and green power here...I also agree with the argument that Canada has good regulatory framework and governance to ensure that environmental and social impacts are taken into account and mitigated. Marketing these metals as 'green' and made in Canada would be a huge competitive advantage compared to international competitors."

Large Canadian Pension Fund

"As a resource-based economy, Canada has a unique opportunity to be a major producer of low-carbon commodities and minerals contributing to a net-zero economy."

Andrew Hall, Director, Sustainable Finance, TMX Group

Leveraging Canada's low-carbon electricity grid for North-South integration into US electricity markets

Optimized Electricity Generation and Transmission – A Story the Provinces Must Write Together

PHILIP DUGUAY, CANADA GRID, TRANSITION ACCELERATOR

The Expert Panel highlighted “optimized electricity generation and transmission” as a vital area of the economy requiring guidance from the federal government, provincial and territorial lawmakers, and the nation’s financial institutions. Key to this is creating uniform rules across the provinces for planning, permitting, siting and operations of major segments of the future energy economy, including large interregional transmission projects and municipal district energy systems. The end goal is to make Canada’s economy globally competitive in a carbon-constrained world.

We have international examples of how this can be developed from the European Union’s “Projects of Common Interest” model or the Australian Energy Market Operator. These examples illustrate how sovereign or federated states can unite to incentivize the development of the macro-grid across jurisdictional boundaries.³ The US federal government and states are also actively involved in reform processes for interregional transmission projects, as well as expanding the number and footprint of regional transmission organizations (RTOs).

Policymaking for electricity is in the domain of provincial governments, but from a technical and operational standpoint, Canada’s future economic competitiveness and ability to reduce greenhouse gas emissions rests upon a national approach to grid integration. To attract investment to the nation’s grid, the provinces must align to model, plan, procure and operate interregional transmission infrastructure, most likely along with our American neighbours. With the reform process already underway in the U.S. there is a need to act now in Canada.⁴ Harnessing these reforms to drive Canada towards east-west intertie infrastructure and other priorities will create enormous economic benefits for the entire country, harnessing new investment and driving efficiencies from the existing system.

The Canadian Electricity Association forecasts a need to deploy \$20 billion a year into the grid until 2035, just to maintain current reliability standards.⁵ As Canadians contemplate more than doubling the output of the nation’s power grid by 2050, it is foreseeable that investment requirements will rise dramatically. Which raises the question — where will all this capital come from, and how can it be deployed in a cost-competitive manner?

³ “Projects of Common Interest”, *European Commission*, online: <https://ec.europa.eu/energy/topics/infrastructure/projects-common-interest_en>. “About AEMO”, *Australian Energy Market Operator*, online: <<https://aemo.com.au/about>>.

⁴ “FERC, NARUC to Establish Joint Federal-State Task Force on Electric Transmission” (17 June 2021) *Federal Energy Regulatory Commission*, online: <<https://www.ferc.gov/news-events/news/ferc-naruc-establish-joint-federal-state-task-force-electric-transmission>>.

⁵ “Electric Utility Innovation: Toward Vision 2050” (2015) *Canadian Electricity Association*, p12, online: <<https://electricity.ca/wp-content/uploads/2017/05/ElectricUtilityInnovation-2.pdf>>.

With an improved governance structure, and uniform rules for the development, siting, permitting and operations of interregional transmission projects, provinces can attract institutional investors from Canada and around the world. For example, through an interregional body such as an RTO model, or an energy imbalance market (EIM) structure, provinces and states can cooperate on the development of the macro-grid. This would support crowding in a mix of public and private investment, and deploying new technologies while ensuring an affordable, abundant supply of clean energy electrons for the decarbonization of Canada's communities and industries. Canadian decisionmakers need to approach our own reforms with a diplomatic, industrial policy, and greenhouse gas-abatement mindset. It is the lack of governance and a unified vision — and not technology — which pose the largest barriers to investment.

Several interviewees suggested that Canada has a significant opportunity to leverage its clean electrical grid in order to assist in the decarbonization of the US electricity sector. The discussion of progress on Recommendation 15 in Section 1 mentions some progress on this topic; however, interviewees noted a significant lack of progress on developing efficient and sustainable electricity grids of the future.

“We've been very concentrated on an East-West Canada grid...we don't really need this as a priority...we need as many North-South inter-ties as possible from the lowest emission Canadian electricity jurisdictions to the very high carbon US power regions that are being required to decarbonize...”

Lisa DeMarco, Senior Partner and CEO, Resilient LLP

Investor engagement

Investor engagement initiatives such as the Climate Action 100+ have proven to be an effective means of achieving positive sustainable finance outcomes and many interviewees believe that leveraging Canada's large institutional investor base for engagement represents an important tool. Recommendation 10.2 relates to establishing a national engagement program, akin to Climate Action 100+. The RIA, Shareholder Association for Research and Education (SHARE), and Ceres are working in collaboration to develop Climate Engagement Canada (CEC), the aim of which is to provide additional engagement in key Canadian sectors and companies that are not covered by larger global programs such as Climate Action 100+.

Investor engagement and holding these firms accountable will be critical to achieving meaningful emission reductions across Canada. For example, a recent ISF report found that within the S&P/TSX Composite Index, the actions of the largest emitters with reduction targets are critical to achieving progress in terms of emissions reductions. In particular, if 29 of the top emitting firms with targets met them, the total reduction in emissions would equal 98% of the total reduction achieved if all 60 Index firms with targets achieved them.¹¹¹

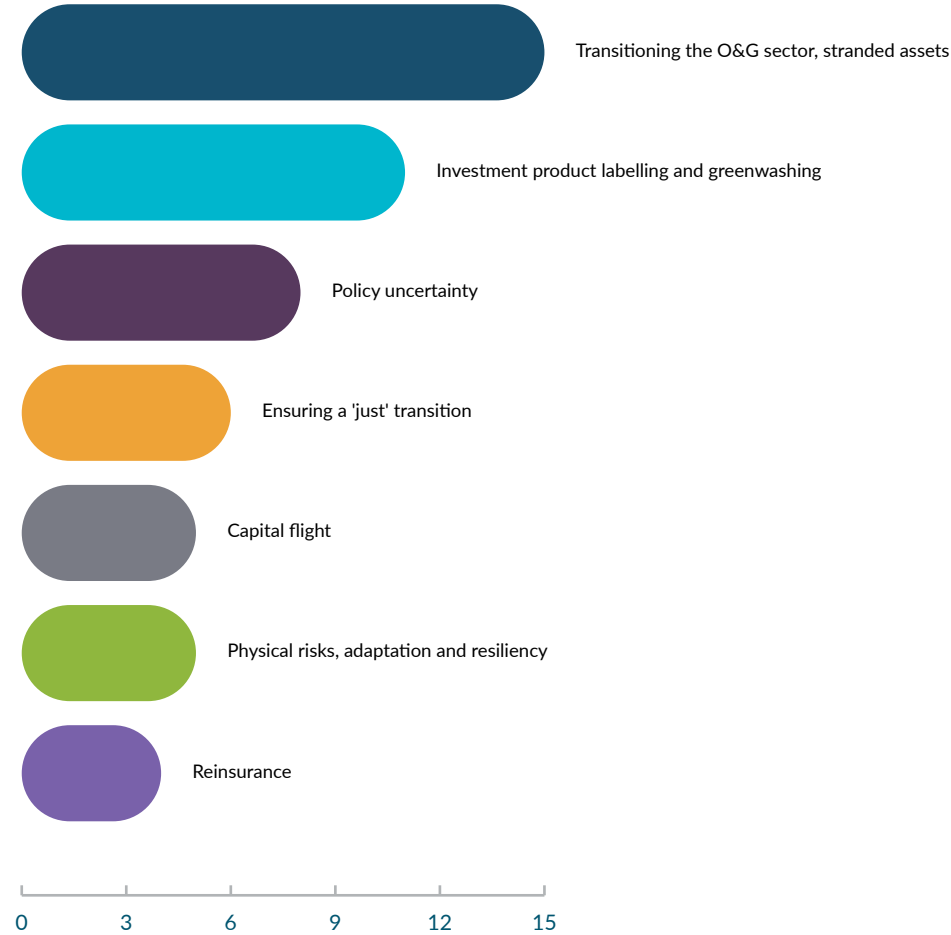
“The energy sector is an integral part of the Canadian economy and our equity market; thus a divestment strategy is sub-optimal. One tool that Canadian investors have if they still want to invest in the energy sector is engagement...which is an important tool to help companies transition to a low carbon economy and improve their disclosure. This is still not a universal practice across Canadian asset managers”.

Lesley Marks, Chief Investment Officer, Mackenzie Investments

KEY RISKS / IMPEDIMENTS

Figure 5 identifies the seven most frequently referenced key risks and impediments facing Canada's transition to a sustainable economy. We discuss each of these in order.

FIGURE 5
Key Risks and Impediments



Transitioning the Canadian oil and gas sector and the risk of stranded assets

The most frequently cited risk was transitioning the Canadian oil and gas sector, while we previously noted that the 4th most frequently cited need for short-term action was to provide support for the energy transition. This is consistent with a recent statement by the Bank of Canada in its 2021 Financial System Review, which stated that assets exposed to climate-related risks are generally mispriced, and could leave investors and financial institutions exposed to sudden losses in the value of carbon-intensive assets in the transition to a low-carbon economy.¹¹² The discussion of progress on Recommendation 12 in Section 1 mentions some progress on this topic; however, interviewees noted there is still much work to do.

“There is urgency to this because it will come to other sectors that have not had the scrutiny that the O&G has been under. The irony is the O&G industry have woken up and seen this as an opportunity. I think they could potentially do it by 2040 not 2050, or sooner, it all depends on availability of capital to do so.”

Peter Tertzakian, Deputy Director, ARC Energy Institute

Investment product labelling and greenwashing

Turning the Tide on Greenwashing

**MICHAEL THOM, CFA MANAGING DIRECTOR, CFA SOCIETIES CANADA,
AND IAN ROBERTSON, CFA, VICE-PRESIDENT, DIRECTOR AND PORTFOLIO
MANAGER AT ODLUM BROWN LTD.**

With the growing number of products that aim to address investors' ESG concerns, investment managers and the companies in which they invest are subject to increased scrutiny of their claims.

Evidence of “greenwashing,” or giving a false impression that something is more ESG-friendly than it truly is, was found by the European Commission (EC) earlier this year. They found that in 42% of cases “online claims were exaggerated, false or deceptive and could potentially qualify as unfair commercial practices under [EU] rules.” Investment managers face similar scrutiny of their products and processes, as provincial securities commissions in Canada and the SEC in the U.S. recently examined claims by a select number of investment products and their managers.

The challenge in mitigating potential greenwashing claims can be broken down into three related areas: claims made by issuers; claims made by funds that invest in the issuers; and claims made about the investment process or strategy.

The EU's new disclosure requirements on sustainability (SFDR) take aim at all three areas by establishing a standard taxonomy and labelling. It identifies and labels companies according to four tests of environmental sustainability, and through this and related regulations, it mandates that asset managers apply similar tests and labels at the fund or product level (investment holdings), and at the firm level (investment processes).

Alignment between ‘sustainable’ issuers and ‘sustainable’ investment funds is intuitive — a fund holding mostly green investments would appear also to be green — but it also highlights the third area of greenwashing: the assumptions implicit in different investment processes.

The alignment of investment fund holdings is a type of screening, in this case alignment with precise SFDR sustainability standards but in other cases with moral or religious standards, that resonates with retail and institutional investors alike ... but it is different from the investment process originally promulgated by the UN backed PRI in 2006. That process eschewed screening and instead followed traditional investment theory to focus on the integration of ESG factors into the analysis and valuation of securities, and the stewardship of those investments once chosen for a portfolio. The recent election of dissident directors at Exxon Mobil Corp is a high profile example of successful stewardship.

Using the lens of an investment professional rather than regulator, CFA Institute recently published its own draft ESG Disclosure Standards for Investment Products, which will lead to finalized global standards later this year that “provide greater transparency and comparability for investors” and allow “asset managers to clearly communicate the ESG-related features of their investment products.”

Global standards should encourage many regional product certification or labelling initiatives, whether mandated by regulators as with SFDR, developed by industry consortia such as the proposed Responsible Investment Fund Identification Framework from the Canadian Investment Funds Standards Committee (CIFSC), or overseen by industry associations such as the Responsible Investment Association Australasia’s successful product certification program.

A global consensus is emerging on how regulators and industry can work together towards a common set of principles in ESG-related practices, procedures, and disclosure for investment products and their managers, as recently outlined in The International Organization of Securities Commission’s (IOSCO) Sustainable Finance Task Force (STF) Workstream 2 report, setting out five high-level recommendations.

Canadian securities regulators were involved in the creation of the IOSCO recommendations, and at the time of writing these recommendations seem likely to form the outline for Canadian regulation, in concert with complementary industry-driven standards.

Canada’s approach is likely to account for our particular regulatory and economic structure, but the outcome – an alignment of investor expectations and investment products delivering on their claims relating to ESG – should be equally effective. The ultimate goal in both the EU and Canada should be the direction of new capital toward better ESG outcomes.

Clear taxonomy and regulation are essential, but the productive direction of capital also requires improved data disclosure. Fortunately this has been long supported by a thriving not-for-profit sector, including for: carbon footprints (CDP/CDSB and TCFD); labour practices (the Workforce Disclosure Initiative); and definitions of sustainability (SASB, GRI). The emerging ESG data paradigms and disclosure norms will allow investors and regulators to more accurately determine the veracity of corporate claims, just as the EC did in its review of green product claims.

The proliferation of and claims by ESG-related investment products presents a challenge for the investment industry, but it’s one that’s being met by better data, increased corporate disclosure, development of clear standards for investment products, and increased regulatory oversight.

The second most frequently referenced risk was the lack of specific criteria for investment holdings within an ESG or sustainability fund, which are not well defined, and hence leave room for misinterpretation – particularly on the side of retail investors. Many note that the term ESG does not necessarily translate into low-carbon, and there is significant public confusion around this concept. Several interviewees expressed hope that the recent work by the CFA Institute to establish ESG Disclosure Standards for Investment Products would assist in alleviating some of the confusion for investors.

“It is an important aspect to get right because we must maintain confidence in the system to ensure capital flows appropriately and investors are not taken advantage of. For that to happen, customers (importantly including unsophisticated investors with minimal training or means to investigate) must be able to know that what they are getting is consistent with their objectives. But the rules must also practically work for the product providers – they must have confidence in how they will be judged or sanctioned. As a result, several things are required: Making the rules clear, understandable, executable, and objective to the industry so they have a basis to know when they are in bounds or out of bounds; labelling, so customers know what they are buying; providing accessible education to both buyers and sellers tailored to their circumstances; and some reasonable level of policing.”

Andy Chisholm, Board Director, RBC, Member of Canadian Expert Panel on Sustainable Finance

“One of the things that worries me in the sector is how we talk about ESG investments and assets under management in the investment funds industry...you keep seeing these numbers going up...yet I don't think the numbers always relate to real social or environmental impact on the ground.”

Sandra Odendahl, Vice President, Sustainability, Scotiabank



Policy uncertainty

Many noted that in order for issuers and financial markets to properly account for a price on carbon, the policy signals must be clear. Carbon pricing serves as a critical demand driver for investments in carbon abatement and other clean technologies. In this regard, several interviewees were encouraged by the federal government's announcement that the price on carbon will increase to \$170 per tonne by 2030, and by the March 2021 Supreme Court of Canada ruling that the proposed carbon pricing regime was constitutional. However, carbon pricing is but one policy variable, and clear guidance is necessary for several other regulatory issues in order to unlock private capital.

“If the government can follow through with the \$170 price on carbon...this is going to move the market...the market pull will be real, it'll be disaggregated, and it'll be across every industry...and if that is there, the funding for the technologies will be there as well.”

Tom Rand, Managing Partner, ArcTern Ventures



Ensuring a “just” transition

Many interviewees noted that the transition to a net-zero economy will impact various sectors and jurisdictions differently, creating jobs in some, while eliminating jobs in others. It is essential that we provide assistance and opportunities to those workers and communities that are impacted by this transition. The federal government launched a “just transition” consultation process in July 2021 focused on helping workers and communities transition to a net-zero economy.¹¹³ Further, climate change itself disproportionately impacts society’s most vulnerable populations, and it is important that we provide the tools and infrastructure to ensure all of Canada reaps the benefits of a resilient and sustainable economy.

“Climate change, like the pandemic, will impact various areas of society very differently...we will need a transition that brings everyone along...if climate change creates some big new divide, we’re not going to get to where we need to go.”

Tiff Macklem, Governor, Bank of Canada, Member of Canadian Expert Panel on Sustainable Finance



Capital flight if we do not ramp up transition efforts

Interviewees noted the importance of being aware that Canada is competing for capital with many other countries’ capital markets, and projects must be internationally attractive and competitive. For example, several large global institutional investors, such as New York State Pension Fund and the Norges Bank Investment Management, have begun to divest from Canada due to climate risk.^{114, 115}

“It’s not just about what we’re transitioning away from, but also about how we will be competing for global capital and opportunities in the future.”

Monika Freyman, Head of Responsible Investment, Mercer Canada



Managing the physical risks of climate change – adaptation and resiliency

Several interviewees noted the importance of managing the physical risks associated with climate change, many of which we have been experiencing for some time now. This is consistent with Canada's Changing Climate Report, which was released in 2019, which noted that Canada's rate of surface warming is more than twice the global rate.¹¹⁶ Relatedly, between the early 1980s and 2019, Canadian insurers adapted to a twenty-fold increase in severe weather damage claims, with claims doubling every five to 10 years according to the report, "Climate Risks: Implications for the Insurance Industry in Canada."¹¹⁷ The Insurance Bureau of Canada estimates that for every single dollar paid out in insurance climate for homes and businesses, Canadian governments pay out \$3 to recover public infrastructure damaged by severe weather¹¹⁸.

In April 2021, NRC published a report showing that Canadian communities of all sizes are experiencing the impacts of climate change on their infrastructure, health, culture, and economies, threatening Canada's ecosystems and the vital services they provide, including access to freshwater.¹¹⁹ As these impacts will persist and intensify over time, urgent action is needed to reduce greenhouse gas emissions and increase resilience to climate change through adaptation. Relatedly, Budget 2021 announced funding to invest in resiliency and adaptation, including: \$1.4 billion over 12 years for the Disaster Mitigation and Adaptation Fund; \$63.8 million over three years to complete flood maps in high-risk areas; \$100.6 million over five years to enhance wildfire preparedness in Canada's National Parks; and \$28.7 million over five years to increase mapping of areas in Northern Canada at risk of wildfires.¹²⁰

Several interviewees also highlighted the important distinction between risk and uncertainty within the context of climate change and finance: with risk being defined as when future events occur with measurable probability, and uncertainty existing when the likelihood of future events is indefinite or incalculable.¹²¹ In the case of climate, ecological breakdown and its corresponding physical impacts facing the financial sector are characterised by non-linearity, tipping points, and feedback loops in a complex, dynamic and interconnected environment.¹²²

"Over any single year climate change does not markedly change the insurance industry...despite increasing levels of risk, the last 10 years remain a sound predictor of the level of risk to be expected next year...they are a nearly useless predictor for 20 years from now however...in 20 years climate change will have broken our business model because many of our clients will not be able to afford to insure against their physical risk exposure amplified by climate change..."

Rob Wesseling, CEO, The Co-operators



Reinsurance risk for carbon-intensive companies

Related to the comments above regarding the distinction between risk and uncertainty caused by climate change, several interviewees noted that Canada's carbon-intensive industries could be at risk in the future of being unable to obtain reinsurance as a result of increasing climate risk and investor pressure.

“A lot of financial institutions are under pressure to make sustainability a priority and meet net-zero targets...they will have issues with fossil fuel projects...we're already seeing companies pulling out of large projects...for example global property and casualty re-insurers reducing capacity to certain industries and this can impact the availability and cost of insurance protection for companies in those sectors ”

Stephane Tardif, Managing Director, Office of the Superintendent of Financial Institutions

“Today's globally interconnected financial system introduces unique challenges and opportunities in the energy transition. As climate policy and risk pricing evolve, Canada must be sure that its key sectors are taking the necessary steps to maintain a competitive value proposition, and in turn, continued affordable access to financing, investment and insurance”

Barb Zvan, President and CEO
University Pension Plan, and member of the Canadian Expert Panel on Sustainable Finance

Exhibit 1

Interview Participants

Kathy Bardswick, President and CEO, Canadian Institute for Climate Choices

Dominique Barker, Managing Director, Head, Sustainability Advisory, CIBC

Alanna Boyd, Senior Vice-President, Chief Sustainability Officer, Sun Life Financial

Margaret Childe, Head of ESG, Manulife Investment Management

Andy Chisholm, Board Director, RBC, Member of Canadian Expert Panel on Sustainable Finance

Karen Clarke Whistler, Principal, ESG Global Advisors

Jennifer Coulson, Vice President, ESG, British Columbia Investment Management Corporation

Milla Craig, Founder and President, Millani

Jeff Cyr, Managing Partner, Raven Indigenous Capital Partners

Lisa DeMarco, Senior Partner and CEO, Resilient LLP

Corey Diamond, Executive Director, Efficiency Canada

Monika Freyman, Head of Responsible Investment, Mercer Canada

Martin Grosskopf, VP, Portfolio Manager and Director, Sustainable Investing, AGF

Jonathan Hackett, Managing Director and Head, Sustainable Finance, BMO

Andrew Hall, Director, Sustainable Finance, TMX Group

Large Canadian pension fund

Tiff Macklem, Governor, Bank of Canada, Member of Canadian Expert Panel on Sustainable Finance

Lesley Marks, Chief Investment Officer, Mackenzie Investments

Catherine McCall, Executive Director, Canadian Coalition for Good Governance

Sandra Odendahl, Vice President, Sustainability, Scotiabank

Lindsay Patrick, Managing Director and Head, Sustainable Finance, RBC

Tom Rand, Managing Partner, ArcTern Ventures

Fate Saghir, Senior Vice President, Sustainable Investing, Mackenzie Investments

John Stackhouse, Senior Vice President, Office of the CEO, RBC

Pamela Steer, Advisory Board, Institute for Sustainable Finance

Stephane Tardif, Managing Director, Office of the Superintendent of Financial Institutions

Peter Tertzakian, Deputy Director, ARC Energy Institute

Hillary Thatcher, Senior Director, Project Development Indigenous Infrastructure, Canada Infrastructure Bank

Nicole Vadori, Head of Environment, TD Bank

Rob Wesseling, CEO, The Co-operators

Dan Wicklum, President and CEO, Transition Accelerator

Cynthia Williams, Osler Chair in Business Law, Osgoode Hall

Laura Zizzo, Co-Founder and CEO, Manifest Climate

Barb Zvan, CEO, University Pension Plan, Member of Canadian Expert Panel on Sustainable Finance

Large Canadian Pension representative

Exhibit 2

Advisory Council Members

Margaret Childe, Head of ESG, Manulife Investment Management

Monika Freyman, Head of Responsible Investment, Mercer Canada

Andrew Hall, Director, Sustainable Finance, TMX Group

Dustyn Lanz, CEO, Responsible Investment Association

Catherine McCall, Executive Director, Canadian Coalition for Good Governance

Andrea Moffat, Vice President, Ivey Foundation

Florian Roulle, Senior Director, Strategy and Partnerships, Sustainable Finance Manager, Finance Montréal

Alyson Slater, Senior Director, Sustainable Finance, Global Risk Institute

Pamela Steer, Advisory Board, Institute for Sustainable Finance

Hillary Thatcher, Senior Director, Project Development Indigenous Infrastructure, Canada Infrastructure Bank

Michael Thom, Managing Director, CFA Societies Canada

Davinder Valeri, Director, Strategy Risk and Performance, CPA Canada

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