

A CANADIAN TRANSITION PATHWAY: An Urgently Needed Toolset to Finance Canada's Pathway to a Low-Carbon Economy

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EXECUTIVE SUMMARY

Historically, Canada's economic success has mostly been built on our vast natural resources, which have provided us with one of the highest living standards in the world. On a per-capita basis, Canada is also the second-highest greenhouse gas (GHG) emitting country globally. Together with our buildings and transportation sectors, our natural resources industries are the main contributors to Canada's GHG emissions.

We are now at a crossroads. We want to protect our economy and standard of living, but simultaneously climate change is forcing us to reduce our GHG emissions dramatically. Canada has committed to reducing its GHG emissions to net-zero under the Paris Agreement and will soon legislate that commitment. This will require a significant transition for Canada from a high-carbon economy to a low-carbon economy. Although many people fear that will be difficult, if not impossible, the good news is that this low-carbon transition seems within reach financially.¹ The bigger challenge may therefore be how we ensure that the low-carbon transition does not leave any people and businesses behind and how we capitalize on all our skills and experience to achieve our aim.

Reducing GHG emissions to meet Canada's 2030 and 2050 commitments requires both public and private capital to flow toward decarbonizing our high-carbon emitting sectors, such as oil and gas, mining, buildings, and transportation. This requires investments in activities that are already low-carbon ("green activities"). But, perhaps more importantly, it requires investments in activities that are currently high-carbon and need to transition to low-carbon ("transition activities"). To direct both public and private money toward green and transition activities, we urgently need a science-based classification system—a taxonomy—that identifies green activities and transition

activities that will help transform Canada's economy into a low-carbon economy with net-zero GHG emissions by 2050.

The European Union (EU) has already developed a taxonomy for green activities, the EU Sustainable Finance Taxonomy,² that is rapidly becoming the global standard. Instead of developing its own, Canada should consider adopting the EU Sustainable Finance Taxonomy as the basis for classifying "green" business activities. Although some countries have announced intentions to develop a taxonomy for transition activities—a "transition taxonomy"—there is no fit-for-purpose global standard for a transition taxonomy that Canada could adopt. Therefore, Canada should develop its own transition taxonomy that defines in detail activities that are not "green," but will help Canada transition to a low-carbon economy by significantly reducing GHG emissions. Canada's transition taxonomy should be used in a complementary way with the EU Sustainable Finance Taxonomy.

This paper fully supports the idea that Canada needs a "green" as well as a "transition" taxonomy. However, although a taxonomy is an important tool to drive capital toward green and transition activities, it is just a classification system. A taxonomy alone is insufficient to help Canada reach its 2050 net-zero commitment under the Paris Agreement. Canada needs a more complete toolset that helps bring strategy and cohesion to the green and transition activities of all Canadian businesses so that they form a pathway for Canada's 2050 net-zero commitment. This tool could take the form of a voluntary—or possibly even a mandatory—framework under which Canadian companies commit to their own individual 2050 net-zero pathway and implementation plan and to disclose against its commitment and plan based on the TCFD framework. The design of such a company-level

net-zero pathway framework can be informed by, for example, climate change-related expectations articulated by large institutional investors, and examples from leading issuers today.

This paper starts with a brief discussion of the importance and urgency of transforming Canada's economy into a low-carbon economy. Subsequently, we will discuss the taxonomy concept in more detail and provide a brief overview of other taxonomies already developed around the world. Following are case studies about how Norges Bank Investment Management (NBIM) expects its portfolio companies to manage climate change-related risks and opportunities, and how Microsoft has put a net-zero plan together. The paper concludes with a discussion of what we believe could be a fit-for-purpose toolset for Canada's 2050 net-zero pathway:

- a “green taxonomy” that largely embraces the EU Sustainable Finance Taxonomy for green activities,
- a made-in-Canada “transition taxonomy” that defines in detail activities that are not “green,” but will help Canada transition to a low-carbon economy by significantly reducing GHG emissions, and
- an overarching strategic framework under which a company commits to its own individual 2050 net-zero pathway and implementation plan –informed by the green and transition taxonomies –and to disclose against this commitment and plan based on the TCFD framework.

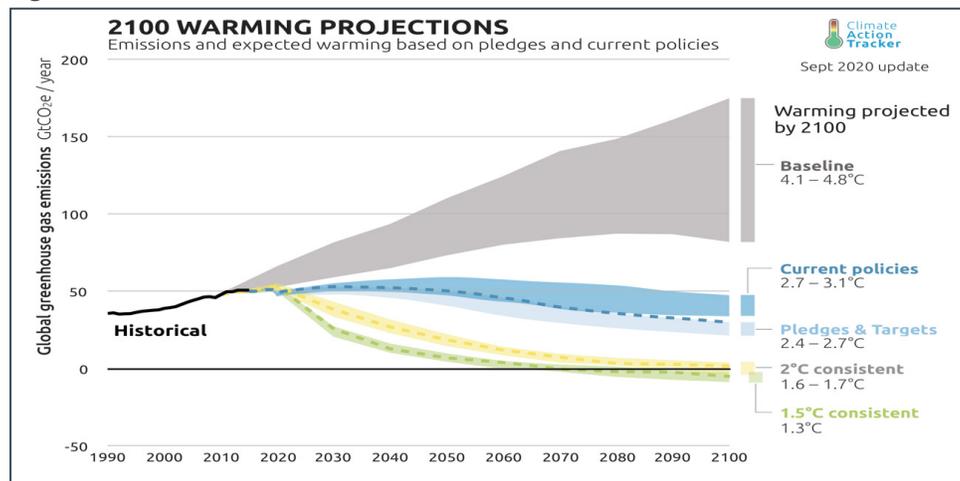
CLIMATE CHANGE: CANADA’S CHALLENGE TO GET TO NET-ZERO BY 2050

The science is clear: our world’s heating trend is accelerating due to human caused GHG emissions. To avoid the most dangerous and irreversible effects of climate change, the world would need to limit global warming to 1.5°C. That means GHG emissions would need to reach net-zero by 2050, a significant deviation from the current trend (See Figure 1).

Considering our current challenges with the pandemic, some question whether we still can, and should, focus on climate change. Some governments and businesses are linking these issues together by saying a low-carbon economic recovery is necessary. We must focus on doing everything possible to both adapt to climate change effects that can no longer be avoided and to mitigate future impacts of climate change. Research shows that failing to adapt and radically reduce GHG emissions will endanger hundreds of millions of lives, trillions of dollars of economic activity and significant parts of the world’s natural environment and human-made infrastructure. The World Health Organization warns that climate change can cause an additional 250,000 deaths per year between 2030 and 2050.³ It is estimated that US\$4 trillion of assets will be at risk from climate change by 2030.⁴

Under the Paris Agreement on Climate Change, Canada has committed to reducing its GHG emissions by 30% below its 2005 levels by 2030 and net-zero by 2050. Canada’s economy is impacted more by the climate crisis

Figure 1



source: Climate Action Tracker

than most other economies. There are several reasons for that. First, Canada is heating up twice as quickly as the average country because of its geographic location. Second, Canada's economy is still primarily dominated by natural resources. The natural resources sector is a high-carbon sector that will have to transition to a low-carbon future urgently. Third, another industry that is dominating the Canadian economy is the financial services industry. Although the financial services industry itself may not be a high-carbon industry, it is an industry that is heavily exposed to a climate change and must play a significant role in assisting Canada with transitioning to a low-carbon economy.

WHY CANADA URGENTLY NEEDS A TRANSITION TAXONOMY?

Climate Change Requires Urgent Action

Before we answer why Canada urgently needs a transition taxonomy, let's first discuss why climate change requires urgent action by governments, businesses and people.

In October 2018, the United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) issued a report that says governments must make "rapid, far-reaching and unprecedented changes in all aspects of society" to avoid disastrous levels of climate change. The report says the Earth will reach the crucial threshold of 1.5°C above pre-industrial levels as early as 2030, further increasing the risk of extreme drought, wildfires, floods, and food shortages for hundreds of millions of people. The temperature has already increased by 1°C, so the world is two-thirds of the way there and we already see dramatic consequences of global warming in the form of dangerous heatwaves, frequent flooding, and massive forest fires. Avoiding even higher temperature increases will require significant action in the next few years."

According to the IPCC, global net emissions of carbon dioxide would need to fall from 2010 levels by 45% by 2030 and reach net-zero by 2050 to keep global warming around 1.5°C. Lowering emissions to this degree, while technically possible, would require widespread changes in energy, industry, buildings, transportation and cities. To limit global warming to 1.5°C, GHG emissions must begin falling by 7.6% each year, starting in 2020. Because of the

COVID-19 pandemic, we may achieve this reduction in GHG emissions this year, but the challenge will be making this a trend after the COVID-19 pandemic. Governments around the world should see the COVID-19 pandemic spending not only as an opportunity but also as necessary radical action toward rebuilding a low-carbon global economy.

If countries keep their GHG reduction pledges to the UN, generally known as "intended nationally determined contributions" (NDCs), climate change will cause average global temperatures to increase beyond 3°C, and will adversely affect every ecosystem on Earth. Already, we see how climate change can exacerbate storms and disasters, and threats such as food and water scarcity, which can lead to conflict. Doing nothing will end up costing us a lot more than if we act now. We have an opportunity to take steps that will lead to more jobs, greater prosperity, and better lives for all while reducing GHG emissions and building climate resilience.

Mitigating global warming requires governments, businesses, and people to increase efforts to reduce GHG emissions dramatically. Already a lot is happening around the world to address climate change. Investments in renewable energy, such as solar, wind, geothermal and hydrogen, and cleantech have increased dramatically, but so much more needs to be done. The world must transform its energy, industry, transport, food, agriculture, and forestry systems to ensure that we can limit global warming to well below 2°C, maybe even as low as 1.5°C.

The Investment Landscape

The Paris Agreement has triggered an acceleration of climate-conscious projects and innovation. Delivering on the net-zero target by 2050 requires transformational economic restructuring as well as the reinvention of the energy value chain. Therefore, the pipeline of financing needs has expanded, but so have investment opportunities. Within this developing sector, investors can actively drive incremental returns by financing projects that contribute to a low-carbon transition, rather than simply divesting from the harmful emitters to reduce risk.

While the transition to a net-zero economy is capital-intensive, investors have compelling reasons to dive into this new investment universe. First, institutional investors have a self-interest in preserving their reputation. The growing public concern can lead to costly litigations if investors do not address the environmental impact of their portfolios. By adopting a climate-conscious portfolio and integrating sustainable investments, institutional investors can avoid irreversible harm to their reputation while aligning their actions with stakeholder concerns. Second, in a sustained low-interest rate environment, investors with a rising risk appetite are constantly seeking high-yield investment alternatives. Climate resilience bonds, for example, offer higher returns compared to traditional bonds while also providing capital for climate-resilient projects. Third, numerous studies have shown that sustainable investments offer superior risk-adjusted returns. Companies that are pursuing greater carbon efficiency have a more sustainable business model and competitive positioning, which leads to stronger long-term performance. Finally, funding the low-carbon transition can create levered economic benefits. The World Bank concludes that the annual cost of climate change is equivalent to 5% of the global GDP, whereas funding the necessary actions only takes 1% of the global GDP annually.⁵ In Canada, according to recent research led by the Institute for Sustainable Finance at Queen's University, investing to reduce carbon emissions for the utilities sector has a lower total cost than simply maintaining existing carbon levels. As a result, financial markets have an inherent responsibility to direct capital flows such that it supports economies in accelerating their low-carbon transition.

The Cost of Delayed Action

Apart from the benefits of investing in the low-carbon economy, the cost of not investing is exceedingly high. According to the International Energy Agency, the annual incremental cost of climate inaction is US\$500 billion. Furthermore, delaying this investment will make the transition path progressively more unpredictable and exponentially increase the cost of managing climate change. In 2020, the cost of getting global warming under control is US\$16 trillion. However, inaction will explode this to US\$20 trillion by 2030. In other words, the longer we wait, the bigger the bill.

Even though there are both capital needs and an investing interest, the current funding gap is significant. To galvanize investment action, the first concern that needs to be addressed is “greenwashing”, a term that represents an unsubstantiated or misleading claim about the environmental benefits of a project or business practice. There is a significant lack of assurance on the integrity of sustainable investments and the transparency in how funding proceeds are utilized. At a time when all companies want to look “green”, ambition without action is simply marketing. On top of that, decarbonization is a multi-year journey. If companies do not periodically disclose their progress and update their short-term targets, investment due diligence will rely on assumptions, preventing investors from making informed decisions. There needs to be a coordinated interplay between regulations and disclosures to make sure these projects live up to their promises.

To address investors’ concerns, a set of scientifically robust, practical, and standardized classifications of what constitutes “green” and “transition” is needed. This has given rise to the development of taxonomies.

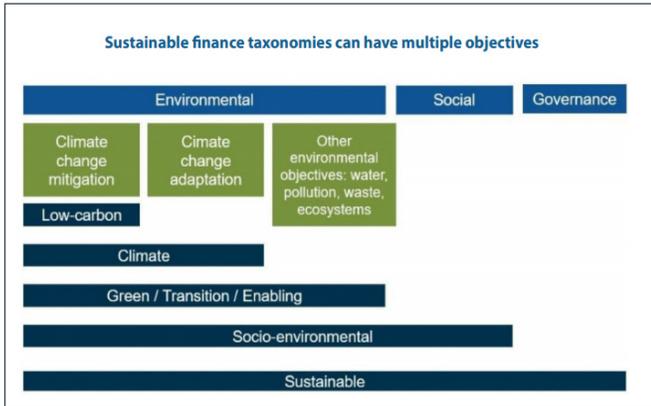
WHAT ARE THE TAXONOMIES?

In general terms, taxonomy is the science of classification. The term is derived from the Greek “taxis”, which means “arrangement”, and “nomos”, which means “law.” Taxonomy is well-known in biology as the methodology and principles of systemic, hierarchical botany and zoology.

A Sustainable Finance Taxonomy

At its core, a sustainable finance taxonomy is a classification instrument that helps financial market participants determine which activities qualify as contributing to environmental, social, or economically sustainable outcomes by developing a universal language among companies and investors (See Figure 2). The main purpose of developing this taxonomy is to help steer capital flows toward sustainable investments that will yield a financial return and provide funding to accomplish key environmental or social objectives. In addition to financial market participants, governments and regulators are other potential users of sustainable finance taxonomies.

Figure 2



Source: OECD

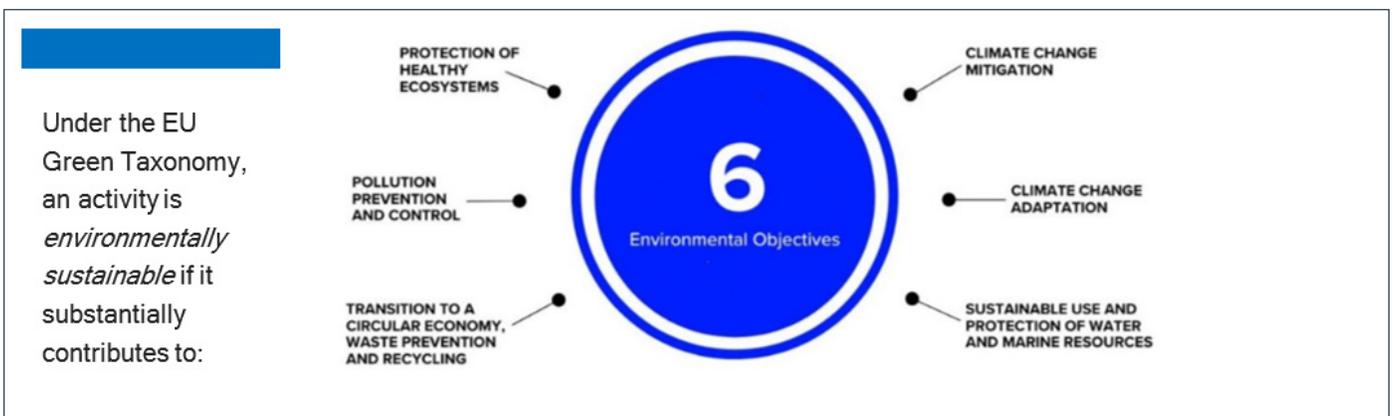
A Green Taxonomy

A green taxonomy focuses on a narrower set of objectives than a sustainable finance taxonomy and defines whether economic activities are – in addition to being financially sustainable – also environmentally sustainable (See Figure 3). The focus should be on providing a technically sound justification for activities that are considered “green.” By having robust and science-based measurements of

sustainability, companies are less likely to misrepresent their activities and environmental commitments. It is therefore a tool, when applied, that not only improves investor confidence, but also manages mistrust. With the standardization, transparency, and technical benchmarks that it provides, implementing a well-established green taxonomy is a crucial step to channel capital into the carbon-neutral transition.

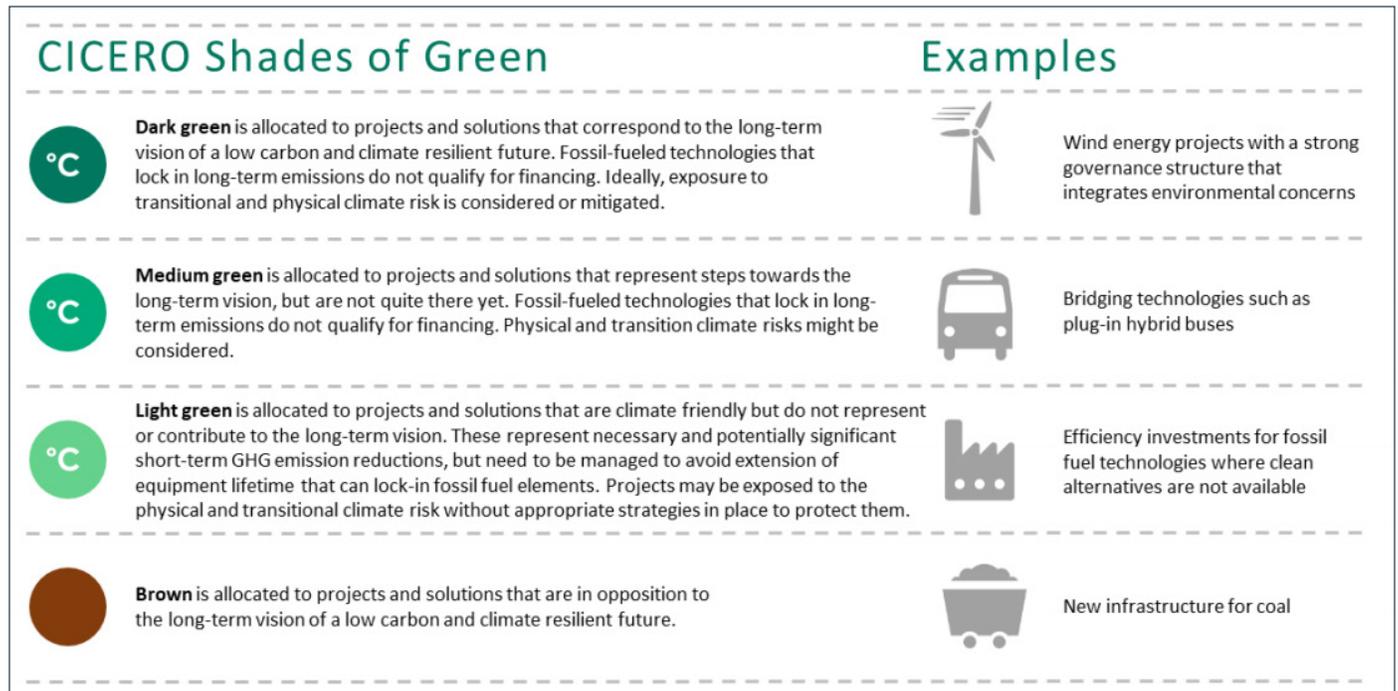
However, the development of green taxonomies has several limitations. First, what now qualifies as “green” may differ in the future. The dynamic environment and evolving landscape have made the need for adaptability a primary concern. Second, the black-and-white classification of “green” can limit the amount of capital investment in transition activities. As Mark Carney, the former governor of the Bank of England and the Bank of Canada stated, “a whole economy transition is not about funding only deep green activities or blacklisting dark brown ones. We need fifty shades of green to catalyze and support all companies toward net zero.”

Figure 3



Source: Refinitiv

Figure 4



Source: Cicero

A Transition Taxonomy

Backed by this idea of “shades of green,” a transition taxonomy better recognizes projects and activities that are not yet environmentally sustainable but can significantly contribute toward carbon-neutrality (See Figure 4). According to the CDP Carbon Majors Report, just 100 fossil fuel producers are linked to 71% of global industrial GHG emissions.⁶ Therefore, it is the progress made by those fossil fuel producers, and other “brown” businesses dependent upon fossil fuels, that critically determines our pace toward reaching green. Compared to a strictly green taxonomy, a transition taxonomy opens low-carbon investment opportunities for a much larger group of capital providers. But more importantly, it allows a much larger group of brown industries to raise the capital required to finance their transition to a low-carbon business model. These new investment opportunities cannot materialize without standardized and authoritative definitions of transition activities. Capital providers need the assurance from a transition taxonomy to identify financially feasible projects and avoid greenwashing.

Sustainable Finance Taxonomies around the World

In the presence of an evolving climate risk landscape, the past six years have transformed the problem from an absence of taxonomies to an overabundance of taxonomies in the marketplace. In addition to the existing taxonomies from China and Mongolia, countries such as Canada, Malaysia and Japan are all actively moving forward on their own taxonomy developments. Evidently, the global market has evolved from the initial stage of cognitive confusion to a surge in diversified expression. However, this creates complexities for investors, impedes the establishment of a global standard, and produces numerous versions of the same taxonomy, each with its own shortfalls. It is therefore important to understand why each country wants its unique taxonomy and what the implications are for Canada.

The predominant EU Sustainable Finance Taxonomy largely fails to recognize the importance of incremental GHG emission reductions, by high-carbon companies, that is essential for resource-driven economies to become carbon-neutral. As a result, Canadian companies in the financial services, natural resources and other sectors

are collaborating to develop a voluntary, industry-led transition taxonomy⁷ to provide transition activity definitions more suitable for Canada's resource-heavy economy. This creates a unique opportunity for Canada to become a leader in defining a global standard for transition taxonomies.

As part of Canada's taxonomy development, an important objective is to facilitate the harmonization of existing taxonomy standards. Experts need to consciously ensure that new definitions do not conflict with other taxonomies, but instead address prevailing gaps and drive continuous improvement. This emphasis on harmonization is also evident on the international stage. For example, as an early developer of green taxonomies, China recently removed "clean coal" financing from its taxonomy guideline to better align with the EU standard and international investors' appetite. In the absence of a global taxonomy, "we need to harmonize to really reduce the cost for investors and enhance transparency for the market," stated Ma Jun, chief economist at the research bureau of the People's Bank of China.

To deepen international cooperation and accelerate coordination on sustainable taxonomies, the EU initiated the International Platform on Sustainable Finance (IPSF) that was joined by 14 member nations including Canada, China, New Zealand, and Singapore. The IPSF has formed a working group to develop a "Common Ground Taxonomy" to display the commonalities between existing taxonomies, which is anticipated to be published by mid-2021. This will allow IPSF members to exchange best practices and align approaches to support a global-level harmonization, and ultimately facilitate cross-border green capital flows.

SOME EXAMPLES: THE INVESTOR AND COMPANY POINT OF VIEW

Case Study 1 – NBIM's Climate-Related Risk and Opportunity Management Expectations

Canadian companies with high-carbon business models need to attract capital from large institutional investors to finance their transition to low-carbon business models. Therefore, it is important to understand what these large institutional investors expect before they are willing to provide their capital to these Canadian companies. Although perhaps somewhat controversial, NBIM is an

example of a large institutional investor that has clearly articulated its expectations.

NBIM manages the US\$1 trillion Norwegian Government Pension Fund Global. When the country discovered offshore oil in 1969 it was decided that the wealth generated would go toward financing the Norwegian welfare state for future generations. As a long-term and global financial investor, NBIM is dependent on sustainable development, well-functioning markets, and good corporate governance.

The expectations of NBIM are primarily directed at boards of portfolio companies. Boards are expected to understand the broader environmental and social consequences of their business operations, considering the interests of all relevant stakeholders.

Climate change gives rise to transition and physical risks and opportunities that are quite different for individual companies. How these risks and opportunities are managed drives medium and long-term returns for NBIM. Therefore, it is critically important that portfolio companies integrate relevant climate change risks and opportunities into their corporate strategy, risk management and reporting.

NBIM actively supports well-functioning carbon markets, carbon taxes and other measures that contribute to a gradual, non-disruptive transition to a low-carbon economy. It strongly believes that the Paris Agreement, the related Nationally Determined Contributions and UN Sustainable Development Goals 13 (Climate Action) and 15 (Life on Land) provide its portfolio companies with clear guidance for their company-specific 2050 net-zero pathways. Effective climate disclosure is critically important to better understand the financial system's exposure to climate-related risks and it contributes to better functioning capital and investment markets. NBIM is a strong supporter of the TCFD framework for climate change reporting and sees it as a global standard.

NBIM's Climate Change Management Related Expectations Fit Within Four Categories:

1. Integrate Climate Change Considerations into Policies and Strategy, for Example:

- Understand the business implications of direct and indirect GHG emissions and gradually reduce GHG emissions
- Consider the impact of different transition and physical climate scenarios on business strategy over relevant timeframes and incorporate material financial impacts in investment planning
- Integrate sustainable business practices in organizational structure, incentive systems, training programs and culture

2. Integrate Material Climate Change Risks into Risk Management, for Example:

- Identify and include material short, medium, and long-term climate change risk in a robust and integrated enterprise risk management framework, including processes for prioritizing, mitigating, monitoring, and reporting climate risks
- Identify and consider risk adaptation and mitigation measures (e.g. improve energy and resource efficiencies, using lower-carbon raw materials, protecting high-carbon-stock landscapes)
- Identify and monitor material climate change risks in supply chains, implement low-carbon procurement policies, share best environmental practices, and integrate the cost of carbon in supply chain management systems

3. Disclose Material Climate Change Information, for Example:

- Disclose a strategy for addressing material physical and transition climate change risks and opportunities, and align their disclosures with globally accepted disclosure standards, such as the TCFD framework
- Be fully transparent about use of climate scenario analysis, including key economic, regulatory, technology and physical assumptions

- Develop a framework for monitoring GHG emissions associated with business operations as well as supply chains

4. Engage Transparently and Responsibly on Climate Change Policy, for Example:

- Have policies or guidelines for engaging with policy makers and regulators on climate change and related issues and be transparent about associated spending and activities
- Review the memberships of industry associations and interest groups on a regular basis to assess the alignment of advocacy positions on climate change and energy policies
- Promote conditions for well-functioning markets and approach new market-based climate regulations constructively

Case study 2 – Microsoft's 2030 Carbon-Negative Transition Pathway

"The stakes are too high for us to not make bold changes now."

Large institutional investors, such as NBIM, have clearly articulated how they expect companies to address and manage climate change risks and opportunities. Microsoft is an example of a company that is meeting and even exceeding these expectations.

Recognizing the necessity and urgency for a low-carbon transition, Microsoft committed to becoming carbon negative by 2030 across all three emission scopes⁸ (See Figure 5). This is a far more aggressive ambition than its previous goal of being "carbon neutral" which can be accomplished by offsetting emissions with payments. Being "carbon negative" means removing more carbon from the atmosphere than what the company, and its value chain, emits.

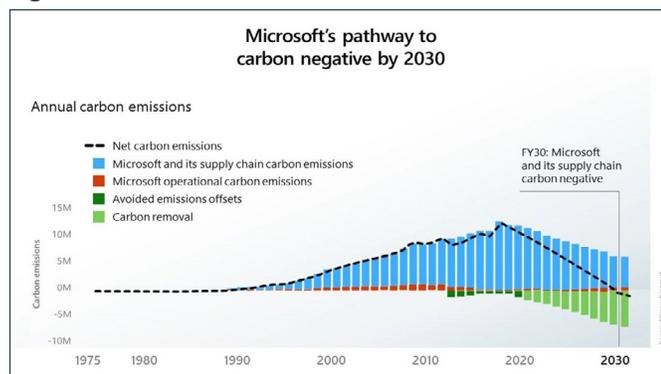
While this bold goal is established with a long-term vision, it is accompanied by actionable short-term steps. Specifically, Microsoft commits to driving down its scope 1 and 2 emissions to near zero through shifting to 100 percent renewable energy by 2025 and having a full electric vehicle

fleet by 2030. Furthermore, it has introduced an internal carbon tax on scope 3 emissions which incentivizes low carbon product design and generates funds to pay for sustainability improvements. By July of 2021, the company will implement incentive plans for its suppliers to reduce all three scopes of emissions.

The transition pathway for Microsoft is guided by seven principles⁹:

1. Grounding in ongoing scientific advances and fundamental mathematical concepts
2. Taking responsibility for our carbon emissions by substantially cutting emissions and removing more carbon than what it annually emits
3. Substantial investments in new carbon reduction and removal technology
4. Empowering customers around the world by developing and deploying digital technology to help its suppliers and customers reduce their carbon footprints
5. Ensuring effective transparency through annual reporting
6. Using its voice to support carbon-related public policy issues
7. Enlisting its employees in advancing innovation

Figure 5



Source: Microsoft⁹

A FIT-FOR-PURPOSE CANADIAN TRANSITION TAXONOMY WITH GLOBAL AMBITIONS

To avoid the most dangerous and irreversible effects of climate change, Canada needs to rapidly transition its

high-carbon, natural resources-based economy into a low-carbon economy in a way that protects our jobs and our high standard of living. For this to be realistically achievable, large amounts of capital must be attracted from global investors to finance this transition.

Canada should consider adopting the EU Sustainable Finance Taxonomy, which has the potential to become the global standard for defining what activities, projects and technologies already qualify as green and sustainable. However, the EU Green Taxonomy is not fit-for-purpose for Canada. Canada needs to attract large amounts of capital from global investors to finance activities, projects and technologies that are not green or sustainable yet but need to move toward sustainability between today and 2050. The EU Green Taxonomy only identifies so-called “deep green” activities, projects, and technologies. To use some of Mark Carney’s terminology, Canada needs a taxonomy that – in addition to “dark green” activities, projects and technologies – also identifies activities, projects and technologies that are currently “brown” or “light green”, but are steadily and predictably moving toward increasingly darker “shades of green” by 2030 and on the road to “dark green” by 2050.

In its June 2019 final report, the Expert Panel on Sustainable Finance recommended that “[i]deally, Canada would adopt a single internationally-aligned taxonomy encompassing not just green definitions, but a broader mapping of transition and resiliency-linked economic activities and asset classes.” Building on this recommendation, the CSA Group (CSA) was retained by a consortium of Canadian financial institutions to steward the due process for the development of the voluntary, market based “Transition and Sustainable Finance Principles and Taxonomy” (Transition Taxonomy). The CSA formed the Technical Committee on Sustainable and Transition Finance which is comprised of volunteers from across the financial sector (banks, funds, insurance companies, asset managers) and the key resource sectors that the taxonomy will cover (energy, agriculture, utilities).

Bearing in mind that the main objective of Canada’s taxonomy is attracting capital from global investors to finance Canada’s transition from a high-carbon to a low-carbon economy, the question is: what should the Canadian taxonomy look like to achieve that objective?

Suggestions for the “Deep Green” Taxonomy

As recommended by the Expert Panel on Sustainable Finance, the Canadian taxonomy should define which activities, projects and technologies are already sustainable or “deep green.” The advantages of adopting the EU Green Taxonomy are that it would support the desired movement toward a single global green taxonomy which would bring clarity, comparability, and certainty for all stakeholders, including investors, issuers, regulators and governments. Also, adopting the EU Green Taxonomy would build on work already done and infrastructure already built. For example, the European Commission just established the Platform on Sustainable Finance (PSF) as a successor to the Technical Expert Group (TEG). The TEG was the body that developed the technical screening criteria for sustainable activities aligned with the EU Green Taxonomy. The PSF’s role will be to further develop and modify the EU Green Taxonomy. This includes adding new qualifying economic activities, removing outdated economic activities, and modifying technical screening activities for qualifying economic activities. By adopting the EU Green Taxonomy, Canada can benefit from the work of the PSF and may be able to collaborate with the PSF to ensure that Canada’s specific sustainability needs are reflected in the EU Green Taxonomy.

The EU Green Taxonomy has some limited transition elements. If economic activities don’t already meet the quite restrictive technical screening criteria of the EU Green Taxonomy, the TEG recommends that the financing of improvement measures (capital expenditures and operating expenditures) can qualify as taxonomy-aligned if they are part of an implementation plan to meet the activity’s technical screening criteria over a defined period. The TEG recommends a limit of five years for these plans. This clearly does not meet the needs of Canada’s resource-based economy. Canada needs a significantly longer transition period than the proposed five years. More importantly, currently the EU Green Taxonomy does not include any oil and gas, mining, and nuclear energy activities. Although the PSF may include certain mining and nuclear energy activities in the list of EU Green Taxonomy-aligned activities, oil and gas activities are excluded altogether from qualifying as sustainable under the EU Green Taxonomy.

So, clearly, there is a need for Canada to develop or adopt – as the Expert Panel on Sustainable Finance calls it – a “taxonomy encompassing not just green definitions, but a broader mapping of transition and resiliency-linked economic activities and asset classes.” In other words, in addition to a “deep green” sustainability taxonomy, Canada should adopt or develop a “brown and lighter shades of green” transition taxonomy. The big question is what this transition taxonomy should look like. Although some countries and organizations are working on developing a transition taxonomy, there currently is no clear gold standard for a transition taxonomy. This means that adopting a transition taxonomy is not an option for Canada. Canada must develop its own transition taxonomy that will enable Canadian businesses with high-carbon business models to attract capital from global investors to finance their transition to low-carbon business models. A fit-for-purpose Canadian transition taxonomy could have the potential to become a global standard for other resource-based economies, such as Japan and Malaysia.

Suggestions for the “Brown and Shades of Green” Taxonomy

In developing a transition taxonomy, Canada could follow the EU Green Taxonomy activity-focused approach of defining in detail – on an industry-by-industry basis – business activities, projects and technologies that are not necessarily green or sustainable, but that can make a significant contribution to Canada’s transition from a high-carbon to a low-carbon economy.

Although this approach is feasible, it has several substantial challenges, especially considering the urgency of kickstarting our low-carbon transition. For example, defining in detail what qualifies as a transition activity is very labor-intensive and time-consuming. It also requires consensus building among many industry experts, scientists, and policymakers. This approach is also prescriptive and will, by definition, exclude business activities that have the potential to make a significant contribution to Canada’s low-carbon transition. And even a very comprehensive list of qualifying transition activities must be updated continuously because, driven by innovation, technologies will constantly change.

Despite these challenges, we clearly need to develop Canada's science-based transition taxonomy with urgency. The CSA's initiative is a commendable first, voluntary, industry-led attempt that may lead to a much longer-term and rigorous collaborative effort between business, academia, and government, that can expand to include all industries and activities. One thing is clear: it will be a long journey to build this infrastructure, as it has been in the EU with a decade of policy, stakeholder engagement and science work behind developing the EU Green Taxonomy. It is recognized and welcomed that the effort to develop Canada's transition taxonomy is firmly underway, but climate change is upon us and therefore we should not wait for the full elaboration and maturation of Canada's transition taxonomy to take urgent action today on decarbonizing our economy.

Even if Canada is able to develop a transition taxonomy quickly, a taxonomy alone is insufficient to help it reach its 2050 net-zero commitment under the Paris Agreement. Canada needs an overarching transition framework to assist with achieving its 2050 net-zero commitment – a tool that helps with adding up all green and transition activities of all Canadian businesses to create a pathway for Canada's 2050 net-zero commitment.

This tool could take the form of a voluntary – or possibly even a mandatory – framework under which Canadian companies commit to their own individual 2050 net-zero pathway and implementation plan and to disclose against its commitment and plan based on the TCFD framework. The design of such a company-level net-zero pathway framework can be based on – for example – climate change-related expectations articulated by large institutional investors such as NBIM.

Suggestions for an Overarching Transition Framework

Conceptually, Canada's overarching transition framework could be based on the Paris Agreement that set the 2050 net-zero target and asked all UN Member States to set their individual NDCs. As a UN Member State, Canada set its NDC as a 2030 target and a 2050 net-zero commitment. To achieve its 2030 target and 2050 commitment, Canada should ask all Canadian entities, including companies, provinces, territories, municipalities, and crown corporations, to set 2030 targets and 2050

net-zero commitments to assist Canada in achieving its commitments under the Paris Agreement.

Canada could start with developing a principles-driven transition framework based on comprehensive transition commitments and high-quality disclosures by individual companies. To qualify under the Canadian transition framework, companies would have to commit to their own individual 2050 net-zero pathway commitments and implementation plans. This means that companies must integrate and reflect their individual net-zero pathways and implementation plans in their policies and strategies, enterprise risk management processes, TCFD-aligned climate change disclosures, and engagements with governments and regulators. Some of the high-level criteria for a company to qualify under the Canadian transition framework would include

- committing to achieve net-zero GHG emissions by 2050 (including scope 1, 2 and 3 emissions),
- having a detailed, science-based implementation plan with interim targets and milestones for achieving its 2050 net-zero commitment (including aligned capital investment and remuneration plans),
- comprehensively disclosing its climate-related risks and opportunities following the TCFD framework,
- performing and disclosing climate risk scenario analysis for short-, medium-, and long-term timeframes,
- having its implementation plan, disclosures and scenario analysis verified by a qualified third-party, and
- constructively engaging with governments and regulators on climate change with the objective of expediting Canada's transition to a low-carbon economy.

Instead of being activity-focused like the taxonomies, this approach is company-focused. The basic concept is that every company – irrespective of their current business model and level of GHG emissions – should have the opportunity to transition to a low-carbon future business model with the support of Canada's transition framework. A company can use this framework to show how all its businesses, projects and activities contribute to the 2050 net-zero commitment.

A company-focused and principles-based transition framework as described would be a high bar to clear but has several advantages. First, it would provide investors with the credibility, comparability, transparency, and accountability they require. Second, it would not exclude any company arbitrariness from qualifying under Canada's transition framework and from the ability to attract additional investors to finance their transition to a low-carbon business model. Third, it can be developed and implemented in a relatively short period of time.

CONCLUSION

The global consensus on the gravity of climate risk has already been well established¹⁰. With Canada being disproportionately impacted by climate change, both the urgency of and responsibility for addressing this challenge are heightened. A transformational economic turnaround to reach net-zero emissions calls for coordinated public and private sector action, and for capital from both the public and private sectors. This makes ensuring investor confidence a top priority and developing a made-in-Canada transition standard and taxonomy an urgent necessity. With the proliferation of climate change taxonomies around the world and the rising confusion for investors, Canada can contribute to international harmonization by aligning its dark green definitions with the globally recognized EU Green Taxonomy. Simultaneously, Canada can lead the world in developing a much-needed fit-for-purpose "shades of green" transition taxonomy for resource-intensive economies, and helping to create a sensible framework through which these activities can be understood by embracing a company-focused and principles-driven approach, based on guidance from global institutional investors such as Norges Bank. This truly is a nation-building opportunity that we should not let go to waste.

Endnotes

1. A recent report “Capital Mobilization Plan for a Canadian Low Carbon Economy” by the Institute for Sustainable Finance at Queen's University estimates that an annual investment of C\$12.8 billion will be required to meet Canada's target. To put this in perspective, this is only 0.6% of Canada's 2018 GDP, 2.7% of annual provincial tax revenues and less than 10% of the annual capital expenditures of corporations listed on the TSX.
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9. <https://blogs.microsoft.com/blog/2020/01/16/microsoft-will-be-carbon-negative-by-2030/>
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