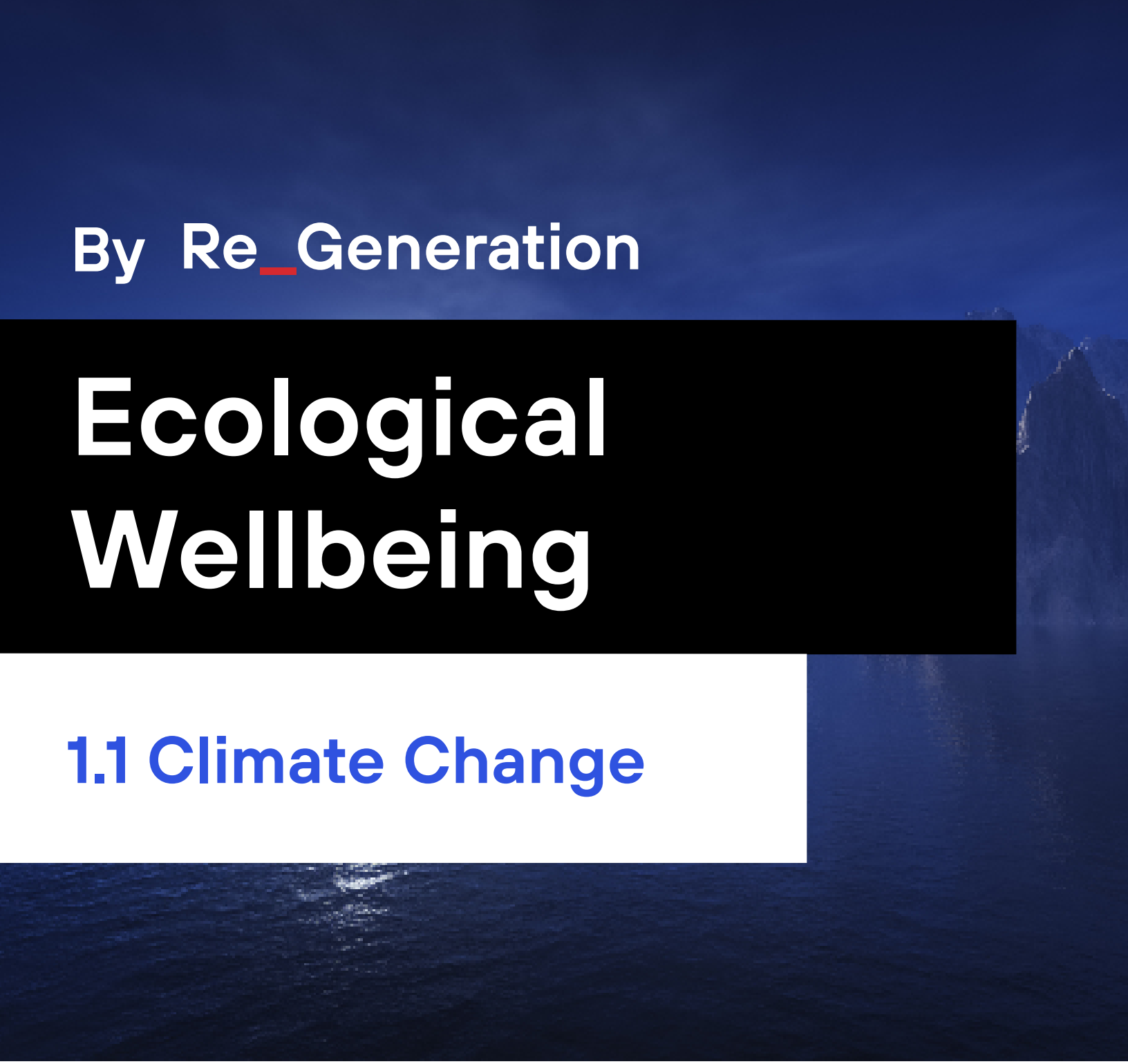

By Re_Generation

Ecological Wellbeing

1.1 Climate Change

Description

The impacts of climate catastrophe are already being felt, and they are escalating. While the Paris Agreement calls on signatories to limit global temperature rise to 1.5 degrees Celsius, the IPCC indicates that this target is very likely to be **significantly exceeded**. The carbon budget required to limit the global temperature rise to 1.5°C will be **consumed in less than a decade**. Energy companies and governments currently plan to burn 120% more carbon that would be permitted in the 1.5 degree carbon budget, a discrepancy known as the **global production gap**. The Rainforest Action Network has determined that the world's 60 largest commercial and investment banks have **provided over $3.8 trillion in funding** to the fossil fuel sector from 2016 to 2020. Despite a flurry of corporate announcements on emissions reduction targets, **very few major firms have made net-zero pledges that are actually credible**, according to the Corporate Climate Responsibility Monitor. Current research shows that **most fossil fuel companies prefer to rely on speculative carbon removal technologies**, and have yet to adopt **science-based targets** focused on reducing the production and combustion of fossil fuel reserves. Without significant improvements, there is a distinct possibility that additional warming could trigger **feedback loops** that lead to warming far worse than 1.5 degrees, which will make **many regions of the world uninhabitable.**

Acknowledgements

Written by Gareth Gransaull, Associate Director of Re_Generation, with review by some of Canada and North America's most influential sustainability leaders.

About Re_Generation

Re_Generation is a Canadian youth movement that seeks to build a regenerative, sustainable, and just economy. We aim to reimagine our schools, repurpose our careers, and remodel our companies to be aligned with regenerative principles. In particular, we provide resources for individuals to launch impact-driven careers and advocate for change within their companies and schools. We also aim to advance public policies that promote regenerative and sustainable business practices.

Our successful 'Our Future, Our Business' Manifesto campaign received the support of 65 youth organizations, 130 high-level executives, and 100 civil society organizations recognizing the need for reform in business education on sustainability. After three years of existence as the Canadian Business Youth Council for Sustainable Development, we have changed our name to Re_Generation to become more inclusive of all youth, not just business youth.

We believe that the ideal society is a regenerative one. Regeneration to us means putting human and ecological well-being at the centre of every decision. It means restoring relationships, both within nature and within society, while helping all communities to thrive. Read more about our history and vision at our About Us page.

Issue Summary

The global climate crisis is escalating more rapidly than scientists predicted, and it is already beginning to have massively destabilizing effects on human society. As catastrophic wildfires wreak havoc around the world, and "once in a century" storms and floods become seasonal events, it is clear that climate change is no longer a distant future threat, but a reality that is lived by millions of people every day. Prospects for averting cataclysmic climate disruption are increasingly dim: at the current rate, the carbon budget required to limit the global temperature rise to 1.5°C will be consumed in less than a decade. Even if we manage to respect the targets of the Paris Climate Agreement, it is estimated that the total cost of a 1.5°C temperature increase will be $54 trillion by the year 2100. However, because the climate is a complex non-linear system, there is a possibility that additional warming will trigger feedback loops that lead to warming far worse than 1.5 degrees, which will make many regions of the world uninhabitable and have the potential to end life on Earth. A 3.7°C temperature rise could cause up to US$ 551 trillion in damage, which is more than all the wealth that currently exists in the world. As the CEO of the insurance giant AXA declared, 4°C of warming this century would make the world "uninsurable."

According to Project Drawdown, annual private sector investments in clean technologies must increase by eightfold to match the $5 trillion required to meet the Paris Accord goal of 1.5˚C of warming. Unfortunately, international capital flows have not shifted to make this a reality. Energy companies and governments currently plan to burn 120% more carbon that would be permitted in the carbon budget allocated by the global Paris Accord, a discrepancy known as the global production gap. The future expansion and production plans of large global oil and gas firms are fundamentally incompatible with a 1.5 degree aligned scenario, as outlined in this report by Oil Change International. The Rainforest Action Network has determined that the world's 60 largest commercial and investment banks have provided over $3.8 trillion in funding to the fossil fuel sector from 2016 to 2020. Global banks continue to finance new oil and gas projects in spite of their public net-zero pledges. The Bank of England has determined that the global financial system currently supports high carbon projects that will cause a global temperature rise of more than 4°C.

At the same time, the global momentum for international climate action has never been stronger. In 2021, the International Energy Agency released a bombshell report calling for no new investment in fossil fuel infrastructure, outlining the need for capital markets to rapidly redirect funds towards a clean energy transition. In a tentative sign that a structural shift might be underway, the European oil companies Eni and BP became the first major oil and gas firms to openly commit to cutting production levels. On May 26th, 2021, three monumental announcements were made: a Dutch court mandated Shell to make an absolute cut in Scope 3 emissions, activist shareholders helped install new climate sympathetic board members at ExxonMobil, and a majority of shareholders at Chevron backed a proposal to commit the firm to Scope 3 emissions reductions. Following a period of heightened international attention, substantial new climate pledges were made in 2020, including a doubling in the total number of net-zero targets. Capitalizing on this growing movement, the UN has launched its new Race to Zero campaign aimed at galvanizing businesses and governments to play their part in building a zero carbon economy through comprehensive Climate Action Pathways.

When it comes to the strength of its climate ambition, Canada remains a laggard rather than a leader. Canada has failed to meet any of its numerous emissions-reduction targets. In fact, since setting its first target in 1992, Canada's national annual emissions have increased by 16%. Canada is the only G7 country whose emissions have increased since the signing of the Paris Agreement. Canada also continues to faithfully subsidize the industry most responsible for fuelling climate change. A recent report

revealed the government announced almost $18 billion in funding to the oil and gas sector in 2020 alone—which is nearly $3 billion more than the government has committed to Canada's new climate plan for the next 10 years. Canada's projected oil and gas expansion from 2021 to 2050 will consume a staggering 16 per cent of the world's carbon budget in a 1.5 C world. The Climate Action Tracker rates Canada's climate plans as "highly insufficient", and on the Climate Change Performance Index we rank 54th out of 60, where we are below Russia and just ahead of Kazakhstan.

Key Considerations

As the stark realities of global climate change become harder to deny, emissions reporting among large corporations is being mainstreamed. Unfortunately, studies suggest that this is not happening rapidly enough. Research by Millani shows that only 66% of companies listed on the Toronto Stock Exchange are currently disclosing annual GHG emissions, while only 23% of companies are reporting in alignment with the standards of the Task Force on Climate-Related Financial Disclosures. Additionally, research by CPA Canada demonstrates that only 11% of Canadian companies include emissions reporting under the purview of their Chief Financial Officer, implying that sustainability is not seen as a strategic or financially material concern. Far more Canadian firms must begin reporting their annual emissions, along with credible plans to reduce them. To compare Canadian companies according to their targets and performance, check out the Net-Zero Leaderboard developed by Canadian Business for Social Responsibility.

Many large firms are adopting more ambitious emissions reduction plans. At least 20% of the world's 2000 largest publicly traded companies have made net-zero commitments. Unfortunately, it can be difficult to discern which of these commitments are genuine, and at worst some firms rely on net-zero announcements as a form of positive publicity without room for real reform. According to the Corporate Climate Responsibility Monitor, very few major firms have made net-zero pledges that are actually credible. Even in Europe, where climate reporting is most advanced, only 30% of firms provide sufficiently detailed information on their climate policies and risks as required in the EU Non-Financial Reporting Directive. Far too many companies rely on vague timelines without interim goals, or make excessive use of carbon offsetting techniques or other unproven negative emissions technologies in order to defer action to a later date.

Credible emissions plans must require firms to abate emissions by preventing them in the first place, rather than continuing to pollute and hoping that negative emissions technologies, carbon capture projects, or offsetting techniques will allow carbon to be removed from the atmosphere with the necessary speed and scale. The IPCC has warned that carbon removal "deployed at scale is unproven, and reliance on such technology is a major risk in the ability to limit warming to 1.5°C" owing to "multiple feasibility and sustainability concerns." Offsets are particularly problematic because natural carbon sinks are not capable of absorbing the total flow of human-made carbon emissions into the atmosphere (and global forests are beginning to become sources rather than sinks of carbon). For example, Shell's low carbon plans have been criticized for relying on the creation of an artificial forest the size of Brazil. Additionally, carbon capture and storage technologies do not yet exist at a scale that would allow large emitters to feasibly trap and sequester the majority of their emissions, and some carbon capture plants emit more carbon than they capture. This is not surprising, given that a literature review of 200 research papers on carbon capture and industrial carbon removal found them to result in net CO2 additions, not reductions. Many scholars believe that negative emissions technologies are a dangerous distraction that serve as a deterrence to genuine mitigation efforts. Current research shows that most oil companies prefer to rely on speculative carbon removal technologies, and have yet to adopt

science-based targets focused on reducing the production and combustion of fossil fuel reserves. For more information on the inauthenticity of carbon offsetting schemes, check out this report by Carbon Accountability.

Emerging international best practices in sustainable finance suggest that offsets should not be used in determining a company or project's transition risk, given that if the source of offsets disappears, if the price becomes too expensive, or if the offsets turn out to be fraudulent, the company will be badly exposed. If a company must rely on carbon offsets, all purchased offsets should be verified with concrete evidence, and also must be additional (i.e. consisting only of emissions reductions that would not have happened without the specific offset project).

As Project Drawdown has written, "net-zero goals cannot be a proxy for climate action." To ensure that companies are adopting genuinely ambitious emissions reduction plans, the following criteria should be met:

1. Adopt official science-based targets, which provide emissions targets that are fully aligned with the most recent IPCC science;
2. Adopt an official low-carbon transition plan timeline with clear 2030 mid-term targets, and a plan to strengthen these goals over time;
3. Implement plans to eliminate all carbon emissions in absolute terms, not just a reduction in carbon intensity, that accounts for all past, present, and future emissions from direct operations as well as those of suppliers, employees, and customers;
4. Only use offsets for unavoidable emissions, and have a plan to phase out these offsets over time;
5. Adopt clear plans to institutionalize emissions reduction efforts throughout the organization (i.e. through a self-imposed costing method such as an internal carbon tax);
6. Adopt capital allocation processes which ensure that emissions prevention efforts receive the appropriate funding and resources;
7. Ensure alignment between sustainability strategy and firm-wide business strategy;
8. Embed climate justice throughout all plans, and have a clear strategy to approach all emission reduction targets through an equity lens.

Tools and Frameworks

For a compilation of all the most up-to-date net-zero tools and resources, see Destination Net-Zero (focusing on Canada) as well as the Net-Zero Knowledge Hub.

1. Disclosure and Reporting

Firms should begin by performing a self-assessment according to this guide for environmental action developed by the Carbon Disclosure Project (CDP), which will determine what stage they are at in the organizational transformation process. To determine where a firm is in its sustainability journey, review the Net-Zero Leaderboard developed by Canadian Business for Social Responsibility.

Following this, firms should begin their disclosure process in line with CDP standards as outlined in their annual questionnaire. For guidance about how to use the CDP's disclosure platform, review this step-by-step guide. Firms should aim to report on all of their attributable emissions as outlined by the Greenhouse Gas Protocol, whose guidelines are contained in this official corporate standard. When determining a GHG inventory, firms should begin by determining an 'organizational boundary' to assess

which specific emissions are under its purview. Firms should determine this boundary by selecting a particular allocation method, which can include reporting on the basis of operational control, financial control, or equity share.

Companies can also use the emissions reporting criteria provided by the Global Reporting Initiative, which has **strict guidelines** for what companies should or should not be disclosing. An organization's emissions can be categorized into three categories called 'scopes':

1. Scope 1 corresponds to direct emissions directly linked to the production of the company's products or services, including, for example, the use of oil or the combustion of fuel linked to the manufacturing process;
2. Scope 2 corresponds to indirect energy-related emissions, including all energy consumption related to the manufacturing process (electricity to power plants, use of heat or cold);
3. Scope 3 includes all other indirect emissions that are not related to the manufacturing process but which occur upstream or downstream of the company's value chain: extraction of raw materials, their transport to the factories, the product's life cycle, its transport, its recycling, etc.

Calculating Scope 3 emissions can be extremely complex, given that they refer to all emissions created upstream and downstream of an organization's supply chain. The Greenhouse Gas Protocol has developed **specific guidance** for Scope 3 emissions calculations, as well as an **accounting and reporting standard** for an organization's entire value chain. When determining what Scope 3 emissions to report on, firms should consider the relative size of the activity, data availability and quality, the total cost and effort of performing the analysis, and any other criteria.

2. Target-Setting

Upon disclosure, organizations should begin setting science-based targets in alignment with the recommendations of the Science-Based Targets Initiative (SBTI), who have developed this **convenient flowchart** to help orient themselves within the SBTI resources. In its **corporate manual,** SBTI has developed specific sectoral targets that are updated on the basis of the most recent peer-reviewed research determining 1.5 degree pathways. Firms are required to release both near-term and long-term targets, reflecting milestone years of 2030 and 2050 respectively. These targets vary considerably by sector; for cement production and airlines, the 2030 near-term target is a 23% emissions reduction, while for the power sector this figure is 57%. Specific **sectoral pathways** are available from SBTI's website, many of which are still under development.

At a global level, SBTI finds that all firms on average should be reducing their carbon footprint by 4.2% annually until the year 2030. SBTI recommends that firms set targets reflecting both a reduction in absolute carbon emissions as well as a reduction in carbon intensity, alongside targets for renewable energy use and supplier engagement. To be SBTI-aligned, 2030 targets must cover at least 95% of company-wide Scope 1 and 2 emissions and at least 67% of Scope 3 emissions (for firms where Scope 3 emissions are at least 40% of total emissions), while 2050 targets must cover at least 95% of company-wide Scope 1, 2, and 3 emissions.

SBTI has also developed a **standard for science-based net zero targets**, and a list of principles by which net-zero targets should be evaluated. Corporate net-zero targets all contain three key dimensions of analysis: the boundary of the target, the mitigation strategy used to attain it, and the timeframe required to achieve it. SBTI identifies a taxonomy of carbon mitigation strategies, of which there are three types:

1. Abatement measures (i.e. actions that companies take to prevent, reduce or eliminate sources of GHG emissions within their value-chains);
2. Compensation measures (i.e. actions that companies take to prevent, reduce or eliminate sources of GHG emissions outside their value-chains, such as purchasing carbon credits or offsets);
3. Neutralization measures (i.e. that companies take to remove carbon from the atmosphere in order to counterbalance the impact of a source of emissions that remains unabated, such as employing negative emissions technologies).

Of these mitigation strategies, only abatement measures intended to prevent emissions from occurring in the first place should be prioritized, while neutralization measures should be minimized. Not all sectors have science-based target guidelines yet, although these standards are in development. To learn more about the SBTI target-setting process, see this new **e-learning course**.

3. Developing Transition Plans

After adopting a clear science-based target, organizations should begin developing credible transition plans that will allow them to achieve this organizational transformation in the required timeframe. The CDP's **Act Initiative** has a guide to help firms develop a transition plan in terms of metrics and targets, strategy, and governance criteria. Based on analysis of its own data, the CDP has outlined that **a credible transition plan must**:

1. Support a strategy for the transition that needs to occur for an organization to pivot towards a net-zero future, with five to ten year near-term science-based targets (SBTs), and then long-term SBTs for 2050 at the latest;
2. Contain verifiable and quantifiable key performance indicators (KPIs) which measure the success of an organization's climate transition and are tracked regularly;
3. Be succinctly integrated into an organization's existing mainstream filings (in annual financial reporting/sustainability reporting/overall business strategy);
4. Include an outline of key strategies and implementation plans related to governance, scenario analysis, financial planning, value chain engagement, policy engagement, and risk management.

Additionally, CDP outlines **specific principles for all transition plans** to abide by, which include that plans must be:

1. Accountable: the plan has clearly defined roles and responsibilities, where the board and C-suite executives are accountable for delivery of the plan;
2. Internally coherent: the plan is integrated into the overall business strategy of the organization and linked to the profit and loss statement;
3. Forward-looking: the plan's orientation is focused on the near-term and long-term future, trending towards 2050;
4. Time-bound and quantitative: the plan's KPIs are quantifiable and are outlined for defined timeframes;
5. Flexible and responsive: the plan is reviewed and updated regularly, with a defined stakeholder (including shareholders) feedback mechanism (e.g., AGMs) in place;
6. Complete: the plan covers the whole organization (i.e. any exclusions from the plan must not be material to the company and/or the environment).

Particularly relevant is the requirement that firms integrate emissions reductions strategies into their financial planning and reporting, specifically to ensure that capital and operating expenditures are allocated appropriately to actually implement transition plans in a feasible time frame. Climate Action 100+

has developed a net-zero company benchmark which specifically looks at capital allocation alignment as a key principle. Metrics for this indicator include whether the company explicitly aligns its capital expenditures with a 1.5 degree pathway, and discloses the methodology that it uses to do so, with specific reference to the year that the capital investments in carbon intensive assets are expected to peak. The benchmark also evaluates firms according to the percentage of their total revenue that can be labeled 'green' (i.e. that is derived from low-carbon products and services), as well as the company's plans to increase its share of green revenue over time.

For further information about specific sectoral decarbonization pathways, check out this comprehensive resource developed by the Exponential Roadmap Initiative, as well as their 1.5 Degree Business Playbook. To evaluate transition plans in particular sectors, check out the assessments developed by the World Benchmarking Alliance, particularly its resources on oil and gas, automotives, and utilities. Distressingly, no firms in the global oil and gas sector have announced credible transition plans, according to this report by Oil Change International. Progress in the global automotive sector is similarly lacking, according to this analysis by the 2 Degree Investing Initiative. To analyze the transition plans of individual companies, review these assessments by the Carbon Tracker Initiative, as well as these company profiles by Climate Action 100+.

One innovative way to improve the integration of transition plans throughout a firm's operations is through the use of an internal carbon pricing program, which can help managers when making costing and resource allocation decisions. Internal carbon prices can take the form of either a shadow price included as an avoided expense alongside energy savings, or an explicit carbon fee charged to individual stakeholders within the company to make them accountable for managing the emissions of their particular unit. Firms can determine an appropriate carbon price for their companies by dividing the total annual funding required for transition initiatives by the annual GHG emissions contained in the firm's boundary. Business unit managers can be made responsible for incorporating carbon fees into their operating budgets, and working with facility administrators to implement GHG reduction measures designed to minimize this new cost. The engineering firm WSP has a brief guide to implementing workplace carbon pricing systems.

Firms should also aim to understand what carbon regulations apply in their jurisdictions, and incorporate these rules and requirements into all transition plans. The Climate Policy Tracker has compiled a country by country list of carbon pricing systems and other regulations.

4. Engaging Suppliers

A fourth crucial component of any carbon transition strategy is a plan to engage with supply chain partners to reduce carbon emissions both upstream and downstream throughout the value chain. The World Economic Forum has created an insight report that provides a roadmap for all businesses to decarbonize their supply chain (i.e. Scope 3) emissions, as well as a brief guide on supply chain decarbonization incentives. The Carbon Disclosure Project has published a state of the supply chain report for 2021. The Exponential Roadmap Initiative also has a list of strategies for incentivizing greater supplier participation in low-carbon initiatives as outlined in its supplier engagement guide. These may include:

1. Supplier recognition: recognize supplier climate performance publically (e.g. through website) or with peers;
2. Preferential conditions: for example, improved payment terms, or locked-in longer contracts linked to climate performance;
3. Applying discount factors in contracts, linked to progress towards climate targets;

4. Direct financing of interventions: financially contribute to GHG reduction (e.g. switch to renewable energy in a supplier factory);
5. Leverage better credit rating to facilitate supplier loans;
6. Collective financing with suppliers, for example, on renewable energy installations;
7. Grouped decarbonization target with supplier.

The **Comet Network** is a worldwide coalition of firms and civil society leaders aiming to create a harmonized framework with universal metrics for action and attribution of emissions across all tiers of supply chains, particularly focusing on the role of industrial supply chain partners in hard-to-abate industries. For further guidance on supplier engagement, see the CDP's **supplier engagement rating system** and **accompanying methodology**.

5. Tools for Small and Medium-Sized Enterprises

The climate transition plans of small and medium-sized enterprises (SMEs) will look very different from those of major corporations. Many small firms do not have the staff or resources to take on large emissions reduction projects, or even to report on and disclose their own emissions profiles. To address this gap, the **SME Climate Hub** has developed, in partnership with Oxford University, a website and a **suite of tools** to help small firms with their low carbon planning decisions. Carbon Trust, a UK-based group, has also outlined a specific **journey-mapping tool** for SMEs, with a **carbon footprint calculator** that is specifically tailored to the needs of small businesses, as well as a series of **carbon reduction tools** and guides related to everything from energy efficiency to manufacturing and procurement. The CDP has also developed a specific **emissions disclosure framework for SMEs**, while the SBTI has created a **guide for small businesses** hoping to adopt science-based targets. To see examples of businesses leading the way, see the **Heroes of Net Zero** competition and **Green Economy Canada**.

6. Tools for Investors

Banks, insurers, and investors have a responsibility to ensure the alignment of their investments, lending, and underwriting with international climate goals. The Paris Aligned Investment Initiative has provided a **clear implementation framework** for investors to follow, which includes action items in six categories: governance and strategy, targets and objectives, strategic asset allocation, asset class alignment, policy advocacy, and market engagement.

To begin, firms should complete an assessment of their exposure to climate risk according to the recommendations of the Task Force on Climate-Related Financial Disclosure (TCFD). To do so, see **these guidelines from the TCFD** on metrics, targets, and transition plans, as well as this **guide to scenario analysis** from the Institutional Investors Group on Climate Change.

In this process, firms need to calculate the alignment of their portfolios with international climate goals. The TCFD has outlined **technical guidelines** for assessing portfolio alignment, and firms can also see **these guidelines** developed by the Portfolio Alignment Team. A helpful resource in this regard is the open source **Paris Agreement Capital Transition Assessment (PACTA) tool** provided by 2 Degrees Investing, which helps assess the alignment of corporate bonds, loans, and listed equities with international climate objectives. The PACTA tool is able to compare the technology mix and five-year production plans of underlying companies in a given portfolio with the required sectoral decarbonization pathways. The climate-relevant sectors currently covered by PACTA are power, coal mining, oil and gas upstream sectors, automotive manufacturing, cement, steel, and aviation, collectively accounting for about 75% of global greenhouse gas emissions. To interact with the PACTA tool, see the resources available from the

Transition Monitor, which helps companies answer four key questions:

- What is your exposure to climate relevant sectors?
- How are your portfolios aligned with climate scenarios?
- Which companies are driving these results?
- What is the potential financial loss if different scenarios eventuate?

To aid in the measurement of portfolio alignment, firms should also consult the financial standard developed by the Partnership for Carbon Accounting Fundamentals, as well as the technical note on portfolio impact metrics for the financial sector developed by the Carbon Disclosure Project.

The approach that many financial actors take towards pricing climate risk into investment decisions could have the very clear consequence of increasing the costs of capital for some of the world's most vulnerable populations, and further making it difficult for them to adapt to climate damages. Equity and inclusion must be seen as sustainability issues, as sustainability cannot be disentangled from larger questions of environmental and climate justice. A climate justice lens should be applied to all policies and procedures in the public and private sectors. For more information about centring climate justice in business decisions, see this guide from B Lab.

For a guide to climate-related regulations for the financial sector around the world, see this guide from the Net-Zero Hub.

The following are a list of relevant financial industry initiatives and networks that firms should consider joining:

- Net Zero Asset Owner Alliance
- Net Zero Banking Alliance
- Climate Action 100+
- Institutional Investors Group on Climate Change
- Global Sustainable Investment Alliance
- Global Alliance for Banking on Values
- 2 Degree Investing Initiative
- Paris Aligned Investing Initiative

A variety of NGOs also provide useful information about the credibility of financial sector climate commitments:

- Bank FWD
- InsureOurFuture
- Human Impact + Profit (HIP) Investment
- Fossil Free Funds
- Coal Policy Tool

Case Studies

Given the flurry of corporate net zero pledges, it can be difficult to separate the genuine commitments from the announcements that amount to elaborate forms of greenwashing. Fortunately, there are some firms that are leading the way. Unilever in particular is one company that has committed to making absolute cuts in its Scope 1, 2, and 3 emissions without relying on offsetting or negative emissions technology. Unilever has also become one of the first companies in the world to submit its net-zero action

plan for an advisory vote by shareholders, in a bid to increase transparency and accountability. Having already achieved 100% renewable electricity deployment across its businesses worldwide, Unilever has also established a $1.18 billion Climate and Nature Fund to help its brands invest in decarbonization and nature protection efforts, particularly with respect to plant-based food offerings. Unilever's climate transition plan can be found here.

SBTI includes a list of case studies on its website, highlighting certain firms that are leading the way. Colgate-Palmolive, for example, aims to reduce its Scope 3 emissions by 30% by the year 2025 from a 2018 baseline year, while also investing in 100% renewable energy for its global operations. Origin Energy, the largest energy retailer in Australia, has plans to completely exit coal-fired power generation by 2032 while significantly growing its renewable portfolio.

Perhaps the most inspiring example of a low-carbon transformation is that of Orsted, the Danish energy company that transformed itself from a fossil fuel firm into the world's most sustainable clean energy company. As early as 2009 Orsted's senior leaders formulated an '85/15 vision', which entailed moving the company from 85% fossil fuels and 15% renewables to 85% renewables and 15% fossil fuels. Nowadays, Orsted is the world's largest offshore wind provider, and it is set to produce 99% clean energy by the year 2025. For more information on Orsted's transformation, see this interview with the head of its offshore wind business.

For examples of small businesses that have begun low-carbon transformations, check out the case studies compiled by B-Corp certified Canadian consulting firm Climate Smart Business. One interesting example is Effect Homes, a green home builder in Alberta that has consistently been ranked the top choice home builder in Edmonton. Effect Homes operates as a net zero energy builder, complete with net zero building designs, solar energy rooftop installations, and energy efficient building envelopes. Another inspiring example is that of Colortec Creative, which has managed to achieve a 64% reduction in emissions since 2014 by switching to all-electric heavy equipment, while also reducing energy use by 46% and saving money in the process.

Organizations/Initiatives

Canadian companies looking to become climate leaders should aim to join this coalition of Canadian firms that have agreed to SBTI-aligned targets under the auspices of the World Business Council for Sustainable Development. Firms might also be interested in joining the Catalyst Business Alliance, as well as the investor coalition Climate Engagement Canada.

For more information about climate activism, corporate commitments, and climate action pathways, check out the following organizations:

- Climate Action Network
- The Climate Reality Project
- 350.org
- Fridays for Future
- Race to Zero
- Exponential Roadmap Initiative
- Business Ambition for 1.5°C
- The Climate Pledge
- We Mean Business Coalition
- Science-Based Targets Initiative

- Transition Pathway Initiative
- Climate Action 100+
- Carbon Tracker Initiative
- The Climate Group
- Carbon Disclosure Project
- C40 Cities
- SME Climate Hub
- Business for Social Responsibility
- Ceres
- World Resources Institute