

# Driving climate resilience through carbon mitigation

## CDP Canada 200 Climate Change Report 2014

On behalf of 767 investors representing US\$92 trillion in assets



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## Karen Clarke-Whistler

Chief Environment Officer, TD Bank Group



Canadian corporations are recognizing the benefit of working together. But let's not kid ourselves, this is a journey and we have a long way to go.



Let me start by congratulating the companies included on the CDP Canada 200 index for 2014. A record number of organizations responded to CDP's call for information on their greenhouse gas emissions and climate change strategy, which tells us that more than ever, Canadian corporations are recognizing the benefit of working together. But let's not kid ourselves, this is a journey and we have a long way to go.

The theme of this year's report, resilience, is particularly apt. The extreme temperatures and a number of very severe weather-related incidents—from the floods of Alberta to the Toronto ice storm—put people and businesses at risk, and the financial cost has been enormous.

As business leaders, we must recognize that extreme temperatures and severe weather-related incidents are the reality we'll be operating in for the foreseeable future. There is broad recognition of the need to shift toward a low-carbon economy, and more and more organizations are working toward this end. But this alone is not enough—we must also build "resilience" into our business strategy.

What do we mean by resilience? It is, as CDP says, the ability to prepare for, mitigate and recover from climate impacts. Being resilient from a corporate perspective means thinking long and hard about the potential effects of a changing climate on our businesses and adapting our infrastructure, policies, processes, products and even the way we interact with employees and customers to be as resilient as possible. It is a daunting challenge, but one that can lead to business opportunities, something that has become very apparent to TD.

Back in 2008, when we announced our intention to be carbon neutral, we made reducing our own carbon footprint a priority. Carbon reduction, whether through energy-saving measures or the use of renewable energy, has to be a consideration in just about everything we do, from how we design and operate facilities, to how we use technology and the way our employees work.

Take our approach to facilities—it led us to introduce net zero energy branches, install solar panels on more than 100 buildings, retrofit lighting and redesign corporate office space among other things. The result? We've seen an 11-percent reduction in carbon emissions from energy, and our energy costs are lower. We're more resilient as we're better able to deal with the energy demands of extreme temperatures.

We've also learned a huge amount about efficient energy use and renewable energy, which has led to business opportunities. In 2013, TD provided \$3.3 billion in financing to companies with low-carbon operations, including renewable energy, and this year saw us become the first financial institution in Canada to issue a green bond—a \$500 million offering dedicated to funding green initiatives, including low-carbon and renewable energy projects.

The severe weather of the past year has had a major impact on insurance companies, TD Insurance included. Building more climate resilience is key—keeping insurance rates reasonable is in the best interest of both insurance companies and the public they serve. There is much that can be done. TD Insurance, for example, is a member and sponsor of the Institute for Catastrophic Loss Reduction and is on the board of the Alberta Severe Weather Management Society. It also subscribes to a weather service so that it can proactively support customers before severe weather hits. The insurance sector is a front-line example of how companies can work with individual citizens, helping them understand the impacts of severe weather and steps they can take to build resiliency into their homes and lives.

Building our resilience is vital, and as corporations there is much that we can and must do in terms of our own businesses and broader society.

The time for action has come.

## Paul Simpson

Chief Executive Officer, CDP



One irrefutable fact is filtering through to companies and investors: the bottom line is at risk from environmental crisis.



**The global economy has bounced back from crisis and a cautious optimism is beginning to pervade the markets. As we embrace recovery we must remember that greenhouse gas emissions continue to rise and we face steep financial risk if we do not mitigate them.**

The unprecedented environmental challenges that we confront today—reducing greenhouse gas emissions, safeguarding water resources and preventing the destruction of forests—are also economic problems. One irrefutable fact is filtering through to companies and investors: the bottom line is at risk from environmental crisis.

The impact of climate events on economies around the world has increasingly been splashed across headlines in the last year, with the worst winter in 30 years suffered by the USA costing billions of dollars. Australia has experienced its hottest two years on record and the UK has had its wettest winter for hundreds of years costing the insurance industry over a billion pounds. Over three quarters of companies reporting to CDP this year have disclosed a physical risk from climate change. Investing in climate change-related resilience planning has become crucial for all corporations.

Investor engagement on these issues is increasing. In the US a record number of shareholder resolutions in the 2014 proxy season led 20 international corporations to commit to reduce greenhouse gas emissions or sustainably source palm oil.

As mainstream investors begin to recognize the real value at risk, we are seeing more action from some of the 767 investors who request disclosure through CDP. The Norwegian pension fund, Norges Bank, with assets worth \$260 billion, expects companies to show strategies for

climate change risk mitigation and water management, and have divested from both timber and palm oil companies that did not meet their standards.

There is growing momentum on the policy front with President Obama's announcement of new federal rules to limit greenhouse gases in the US. In the EU, some 6,000 companies will be required to disclose on specific environmental, social and governance criteria as part of their mainstream reporting to investors. In China over 20,000 companies will be required to report their greenhouse gas emissions to the government.

There is a palpable sea change in approach by companies driven by a growing recognition that there is a cost associated with the carbon they emit. Measurement, transparency and accountability drives positive change in the world of business and investment. Our experience working with over 4,500 companies shows the multitude of benefits for companies that report their environmental impacts, unveiling risks and previously unseen opportunities.

We are standing at a juncture in history. With the prospect of a global climate deal coming from the United Nations process, governments, cities, the private sector and civil society have a great opportunity to take bold actions and build momentum in the run up to the Paris 2015 meeting. The decisions we make today can lead us to a profitable and secure future. A future that we can all be proud of.

## Executive summary

**Recent extreme weather events in Canada have brought the importance of corporate climate resiliency measures and emissions mitigation to the core of business planning. Flash flooding and disastrous winter ice storms have led to increased uncertainty, interrupted supply chains, and physical damage to property for Canadian companies. In response, shareholders and Boards of Directors are increasingly looking to companies to demonstrate clearly their short- and long-term resilience to climate events.**

To demonstrate where Canadian companies are succeeding—and falling short—CDP assessed the current state of climate resiliency among the Canadian companies that disclosed environmental information through CDP in 2014. For the past nine years, the world's largest investors have tasked CDP with administering their annual request for climate change disclosure to Canada 200 companies.<sup>1</sup> This authority, granted by capital markets participants representing trillions of dollars in assets, makes CDP unique among environmental non-profit organizations. Investors rely on CDP to communicate to corporations on their behalf; to identify the critical elements of climate change governance, risk management and greenhouse gas (GHG) emissions accounting; and to provide comprehensive data to integrate into their investment research and decision-making. This year's Canada report will investigate whether companies are strategically focusing on climate change resiliency coupled with emissions reductions for a "win-win" result.

Companies reporting to CDP in 2014 demonstrated that Canadian businesses are investing in climate mitigation strategies. However, in order to meet the challenges that climate change presents for business, companies need to focus more on building resiliency into their operations and being bold in their approach to emissions reductions. Select companies are leading the way by setting emissions reduction targets and making adaptation a priority. These companies are finding enhanced business value through their efforts—by investing in resiliency measures up front, they are able to ensure business continuity and bounce back more quickly after climate impacts, helping improve their bottom line. However, in aggregate, Canadian companies are lagging behind their

global peers on ambitiously responding to climate change and its effects, making companies vulnerable to climate-related impacts and put business continuity at risk.

Robust policy and corporate leadership is essential to drive down emissions in Canada and support climate resiliency measures. The Canadian government has set ambitious reduction targets at a national level. However, their progress against these targets has been slow, and the government is not currently on track to meet them. A continued rise in emissions in Canada threatens to negate the substantial progress already made by leading Canadian companies towards reducing emissions and building resiliency. With only one year until the 2015 United Nations Climate Change Conference in Paris, where there is potential to reach a global agreement in response to climate change, it is more important than ever that governments commit to bold leadership and action on climate issues—and that they make strong progress toward achieving existing goals.

Overall, it is clear in Canada that while some companies recognize the importance of adapting to climate change and seizing climate-related opportunities, a select few are setting strong targets and making the investments necessary to ensure their long-term resilience. To overcome these challenges, ensure continued economic growth that supports jobs and livelihoods, and to accelerate emissions reductions in Canada, businesses must call for robust policies and innovation measures that make them resilient to climate change and help Canada accelerate the transition to a low-carbon economy.

CDP's 2014 Canada 200 report demonstrates the current state of climate resiliency among the 55% of Canada 200 companies that disclosed to CDP.<sup>2</sup>

### In this report, we present findings that show:

- 44% of Canadian companies have not set emissions reduction targets of any kind. This places them significantly behind leading companies globally—80% of the world's largest 500 companies have set targets of some kind.<sup>3</sup>
- Overall, emissions are increasing among Canadian companies reporting to CDP. Companies are investing in emissions reductions, but emissions growth is outpacing mitigation efforts. From 2013 to 2014, total emissions among responding companies increased by 3.5%, and 52% of companies reported an increase in emissions from 2013 to 2014.
- Companies are not driving policy change around climate resiliency. In fact, only 4% of responding companies are engaging policymakers on climate adaptation and resiliency measures.
- High-level corporate leadership is paying increasing attention to climate issues. In 2014, 95% of responding companies reported having senior officer or board-level signoff on climate-related business strategies and measures.

It is important to note that although emissions are growing in Canada, companies are making investments in emissions reductions—and without these investments, the rate of emissions growth would have been approximately 8.3 million metric tons higher. In this report, by focusing on climate resilience and presenting these key findings, we hope to shine a light on the link between emissions reductions, climate change resilience, and long-term profitability. Resilient companies deliver long-term shareholder value by reducing operational costs and increasing revenue from new product lines and services. Companies can identify additional financial savings and resilience benefits by examining the impacts to people, infrastructure, and access to resources within their direct operations and supply chains.

Given the severity of the climate change-related events that impacted Canada in the last year, emissions mitigation and climate resilience have become high-level priorities for corporate managers as well as policymakers.



Although emissions are growing in Canada, companies are making investments in emissions reductions—and without these investments, the rate of emissions growth would have been approximately **8.3 million** metric tons higher.



## Introduction: New risks emerging

**The intense storm and flash flooding that hit Toronto in July of 2013 set a record as the most expensive natural disaster in Ontario's history—with more than \$850 million in property damage, according to the Insurance Bureau of Canada.<sup>4</sup>**

The floods, combined with the June 2013 flooding in Alberta, which shut down the oil industry hub, and the winter ice storms in Eastern Canada that damaged power lines and transportation infrastructure, led Canadian insurers to receive more than \$3 billion USD in loss claims for 2013 related to climate events.

The weather-related impacts of climate change in Canada extend beyond this increased storm activity and include: wildfires, shifts in precipitation, temperature rise, sea level rise, reduced sea ice extent and glacier mass, and changes in ocean climate.<sup>5</sup> The long-term financial impacts of natural catastrophes are projected to cost Canadians \$5 billion per year by 2020, increasing to an estimated \$21–\$43 billion per year by 2050.<sup>6</sup> For corporations and governments in Canada, the link between the increasing severity and frequency of extreme weather events and climate change is clear.

▼▼ The reality is that the frequency of weather events has increased. Storms that used to occur every forty years are now occurring every six years. And because of the composition of Canadian economy and society, we're ending up with more damaging events. ▼▼

—Craig Alexander,  
TD chief economist

4. Mills, Carys, Toronto Star, "Toronto's July flood listed as Ontario's most costly natural disaster," 14 Aug 2013. [http://www.thestar.com/business/2013/08/14/july\\_flood\\_ontarios\\_most\\_costly\\_natural\\_disaster.html](http://www.thestar.com/business/2013/08/14/july_flood_ontarios_most_costly_natural_disaster.html)

5. Warren, F.J. and Lemmen, D.S., editors (2014): Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation; Government of Canada, Ottawa, ON, 286p

6. TD Economics, "Natural Catastrophes: A Canadian Economic Perspective," April 2014.

7. Peace, J., Crawford, M., and Seidel, S. (2013). *Weathering the Storm: Building Business Resilience to Climate Change*. Center for Climate and Energy Solutions.

These disastrous weather events, as well as the longer-term, systemic threats that climate change presents (i.e. sea level rise), have forced companies to adapt and build resilience measures into their business strategies that allow them to bounce back quickly after extreme weather events. Businesses and governments may be asking themselves whether they are experiencing a "new normal"—where climate-related are widespread and reach the heart of business operations—and questioning whether they should begin addressing near- and long-term climate effects.<sup>7</sup>

When looked at in aggregate, Canadian corporations have been driving down their GHG emissions for several years. In many cases, the carbon abatement activities these companies employ also build near-term climate resilience, allowing them to drive down their emissions and strengthen their ability to cope with physical climate risks. This two-pronged approach helps companies avoid business disruption and preserve long-term shareholder value.



Severe droughts such as the one experienced in Canada in 2011 have resulted in numerous wild fires—in Slave Lake, Alberta, 7,000 people have been displaced and the workers' camp SNC-Lavalin was building was entirely destroyed. In 2013, the downtown area of Calgary, Alberta, has been closed for 4 days due to severe flooding. In both cases, these natural disasters have had direct impact on SNC-Lavalin's operations.

—SNC-Lavalin



Industrial Alliance determined that all its components could be impacted by risks associated with climate change, but at varying likelihoods. For example, the Vancouver buildings are more likely to be affected by flooding, whereas Quebec facilities are more susceptible to snow storms. The company has also set up an extensive continuity plan and introduced plans in its offices to minimize waiting periods before the resumption of service and the resulting costs. Relocations are expected for Quebec City, Montreal, Toronto and Vancouver business centres.

—Industrial Alliance Insurance



"Husky operates in some of the harshest environments in the world, including offshore in the Atlantic Region. Climate change is expected to increase severe weather conditions in these locations including winds, flooding, and variable temperatures, which are contributing to the melting of Northern ice and increased creation of icebergs...Icebergs and pack ice off the coast of Newfoundland may threaten offshore oil production facilities, causing damage to equipment and possible production disruptions, spills, asset damage and human impacts." Husky Energy Inc. offshore oil production facilities, causing damage to equipment and possible production disruptions, spills, asset damage and human impacts.

—Husky Energy Inc.



## Emissions and policy backdrop: Canadian target will not be met

**Climate resilience refers to the capacity of a corporate institution or community to effectively respond to and recover from climate change impacts, including episodic weather events and long-term climate threats. Activities that combine carbon mitigation and climate resilience are “win-win” investments for corporations, and companies that mitigate emissions and build resilience now will find it less expensive than adapting to climate change later—after an extreme weather event has resulted in substantial financial losses.**

As corporations collectively begin to reduce their energy waste and GHG emissions, they also minimize the need for resilience in the future and create long-term savings, helping prove the case that climate change is truly a collective problem that requires collective action. If the frequency and severity of climate change events continue to worsen, the timeframe for collective, corporate action will only continue to shorten.

Some companies have already begun to address resilience through their emissions reduction initiatives, though much more work needs to be done. The international community recognizes that warming and weather events are inevitable in the near term, and the 2014 Climate Summit discussed the importance of building climate resilience in this context. This discussion will undoubtedly continue at the 21st Conference of the Parties (COP21) in Paris, where there is potential to reach a global policy agreement in response to climate change.<sup>8</sup> Consequently, governments, businesses, and their communities must strive to protect short-term interests via climate resilience measures and establish ambitious long-term emissions reduction targets.

Though bolstering climate resilience as part of a risk management strategy is a relatively recent idea, emission targets have long been of interest to businesses and governments. The national government of Canada set a target to reduce its national GHG emissions by 17% from 2005 levels by 2020 to comply with targets laid out

in the UN Framework Convention on Climate Change (UNFCCC). Moreover, the 2015 COP will undoubtedly call for Canada to set a more aggressive emissions reduction target—especially given that the United States doubled down on its emissions reduction targets, aiming for 26-28% decrease in emissions from 2005 levels by 2025.<sup>9</sup> However, the latest projections by Environment Canada show that the country will not meet its current UN commitment.

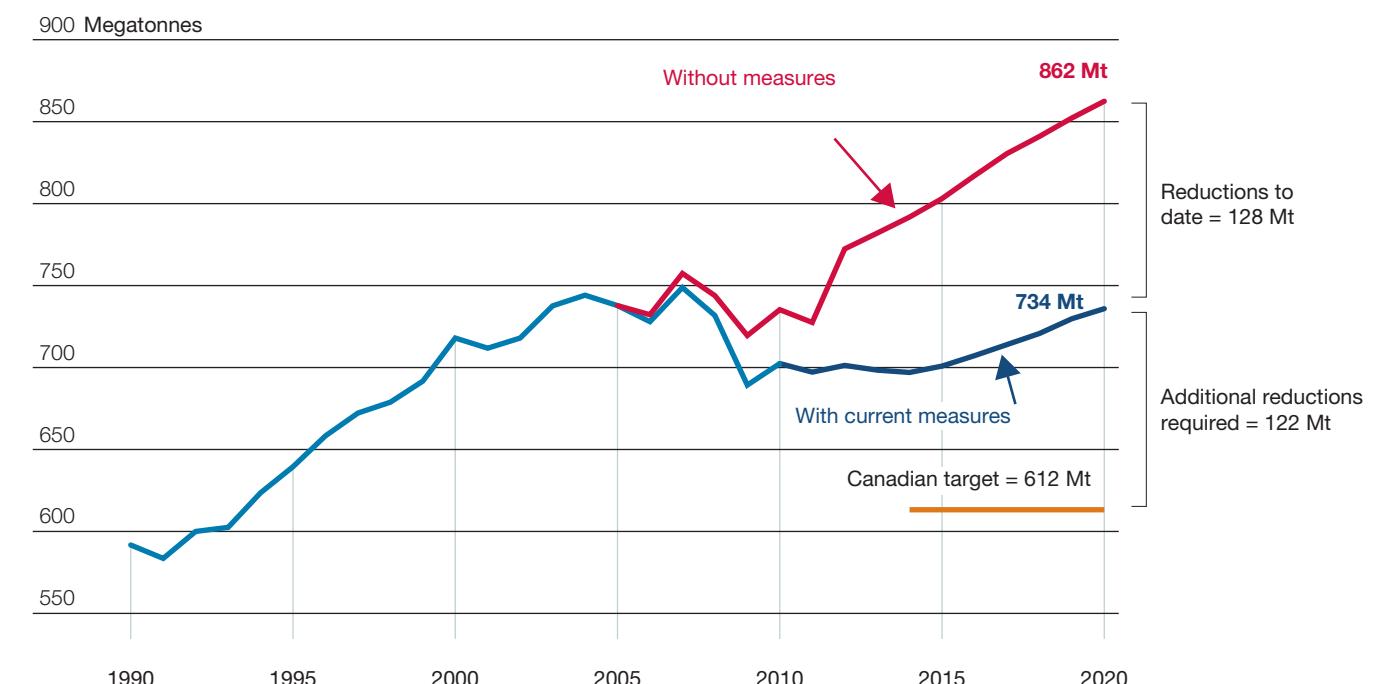
Despite establishing regulations on a sector-by-sector basis, the Canadian government has not defined a national plan with the provinces and territories to achieve their target, according to the Office of the Auditor General.<sup>10</sup> In fact, Canadian GHG emissions are expected to increase (perhaps by more than 30%), which raises the stakes for corporations to reduce emissions. In doing so, companies can identify new win-win opportunities with mitigation and resilience. Ultimately, these win-win initiatives will enable businesses to create more value for shareholders and to protect against possible short and long-term losses from climate change.

8. EurActiv.com, “France spells out ambitions for 2015 climate conference in Paris,” 11 April 2013.

9. Crowley, Michael and Andrew Restuccia. “The Climate Deal that Almost Wasn’t,” Politico, 12 November 2014.

10. Leahy, Stephen. “Canada’s carbon emissions projected to soar by 2030,” The Guardian, 14 January 2014.

**Figure 1: Canadian aggregate GHG emissions historical and projection**



Source: Environment Canada, “Canada’s Emission Trends,” 2013.

### Canadian companies: Emissions are rising

Having acknowledged that the Canadian government will need to take climate change mitigation and resilience more seriously to meet their targets, taking a closer look at the emissions reduction performance of Canadian companies shows GHG emissions are projected to exceed 734 million metric tons (Mt) in 2020. This rise is due primarily to an expansion in oil sands development and GDP growth.<sup>11</sup> An increase on this scale would be 128 Mt more than the business as usual scenario—if consumers, businesses and governments had taken no action to reduce emissions post-2005.

11. Environment Canada, “Canada’s Emission Trends,” 2013.

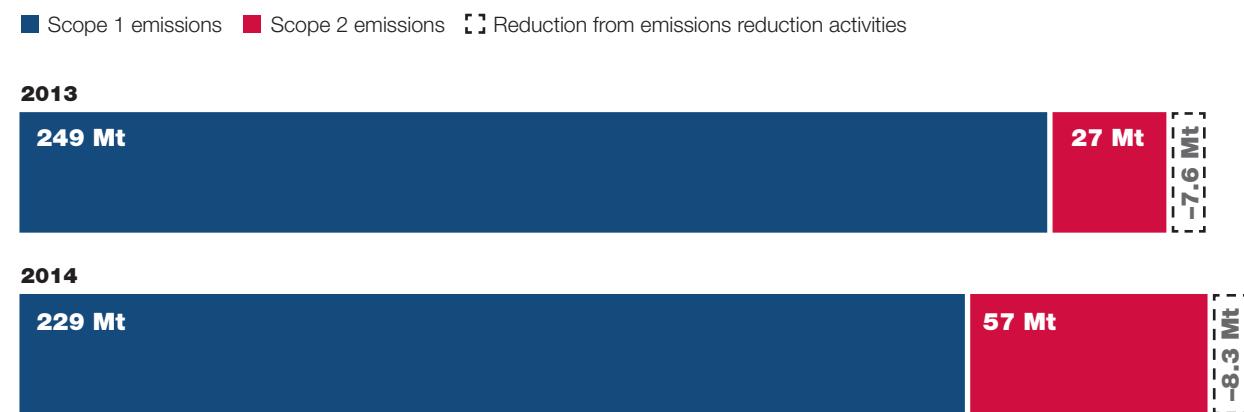
[http://www.ec.gc.ca/ges-ghg/985F05FB-4744-4269-8C1A-D443F8A86814/1001-Canada's%20Emissions%20Trends%202013\\_e.pdf](http://www.ec.gc.ca/ges-ghg/985F05FB-4744-4269-8C1A-D443F8A86814/1001-Canada's%20Emissions%20Trends%202013_e.pdf)

## CDP Disclosure and lagging emissions performance findings

Figure 1 shows a projection of the aggregate Canadian economy. In 2014, 60% of the top 200 companies by market capitalization listed on the Toronto Stock Exchange reported to CDP. Collectively, the 119 companies who disclosed climate change information to their investors through CDP reduced their Scope 1 (direct) emissions by 20 Mt, or only 8%, compared to the 2013 reporting year. However, if that figure is expanded to include Scope 2 emissions, the result yields a net increase

in emissions of 10 Mt, or 3.5%, for the 2014 reporting year.<sup>12</sup> The fact that emissions increased suggests that energy use outpaced the emissions reduction efforts that companies undertook to reduce their Scope 1 emissions. Compared against the business-as-usual scenario, however, wherein companies would not have taken any actions to reduce their emissions, carbon emissions would have been approximately 8.3 million metric tons higher<sup>13</sup> (see Figure 2).

**Figure 2: Scope 1 & 2 emissions and emission reductions comparing like-for-like CDP companies**



While some companies demonstrate awareness of business opportunities associated with climate action, a significant number of companies—4 out of 10—failed to set an emissions reduction target (see Figure 3). Of the remaining responders who did disclose a target, only 20% set long-term targets.<sup>14</sup>

**44%**  
of Canadian companies have *not* set an  
emissions reduction target, compared  
to 20% of companies in the Global 500.

Both statistics demonstrate that many companies are not thinking seriously enough about climate change mitigation strategies. By establishing emissions reduction targets, companies set themselves up to address climate change proactively, with clear goals to work toward. These types of initiatives will also enhance their resilience (whether companies realize it or not). Targets also shape the agenda for corporate climate action, and companies may be more adept in planning and budgeting for mitigation and resilience if they have firm targets in place.

Nonetheless, a select few companies have actually set aggressive absolute and intensity targets. The companies below were selected based on the ambition of their year-over-year reduction target as well as the longevity of their proposed reductions. Although no companies have stated a leading target of 80% reduction by 2050, Air Canada, for example, has agreed to cut absolute emissions by 50% by 2050 from 2005 levels.<sup>15</sup> Companies might be more inclined to establish ambitious targets if they recognized that emission reduction activities could be leveraged to help build resilience (see Figures 4a and 4b).

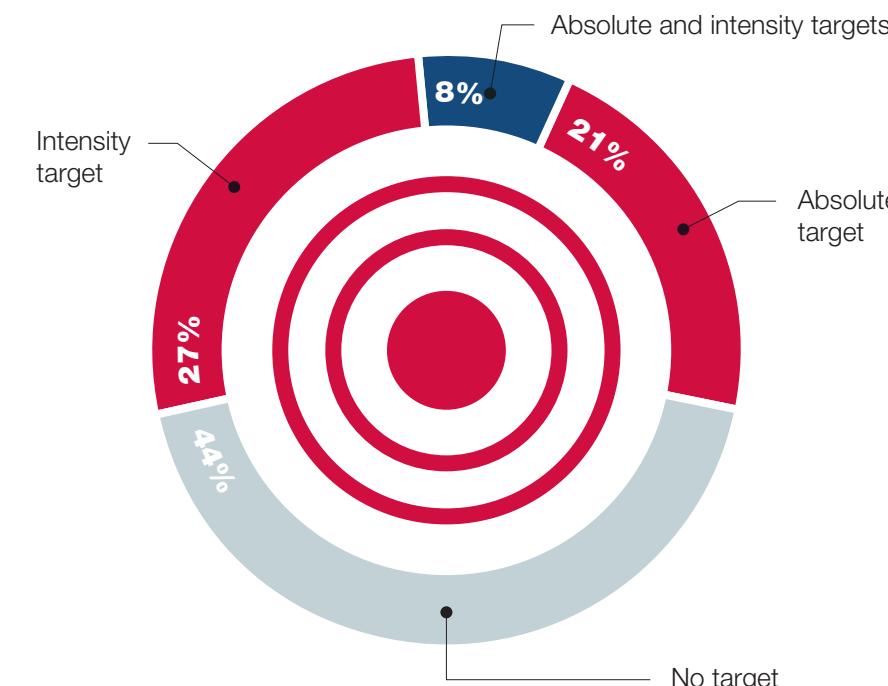
12. Scope 2 emissions are indirect GHG emissions from consumption of purchased electricity, heat or steam.

13. The same set of companies (i.e., like-for-like) were compared in the 2013 and 2014 reporting years.

14. A long-term target is defined as an absolute or intensity target with a target year of 2020 or later.

15. "Mayor de Blasio Takes On Climate Change," NY Times editorial, [http://www.nytimes.com/2014/09/23/opinion/new-york-takes-on-climate-change.html?\\_r=0](http://www.nytimes.com/2014/09/23/opinion/new-york-takes-on-climate-change.html?_r=0)

**Figure 3: Share of CDP responding companies with and without emission reduction targets**



**Figure 4a: Companies with ambitious absolute targets**

Bank of Montreal	BCE Inc.	TD Bank	Air Canada	TransAlta Corp.
Financials	Telecommunications	Financials	Industrials–Transportation	Utilities
Achieved enterprise-wide carbon neutrality goal in FY2010 and set new target to reduce Scope 1, 2 and 3 emissions 50% of 2003 levels by 2020	Reduce Scope 1, 2 and 3 emissions 50% of 2003 levels by 2020	Maintain carbon neutrality for the third consecutive year by purchasing RECs and carbon offsets	Endorsed the industry targets set by the International Air Transport Association (IATA) to achieve a reduction in CO2 emissions of 50% by 2050 relative to 2005 levels	TransAlta intends to achieve a 20% reduction from 2005 coal-related GHG emission levels by 2021, shutting down two coal-fired power plants and reducing emissions by 50% at a third plant
Objectives include reduced electricity consumption in buildings, data centers, networks, and reduced fuel consumption in fleet vehicles				

**Figure 4b: Companies with ambitious intensity targets**

Canadian National Railway Co. Industrials—Transportation	Capital Power Corp. Utilities	Gildan Activewear Consumer discretionary	TD Bank Group Financials	Goldcorp Inc. Materials—Mining
CN has a target to improve efficiency in its rail locomotive fleet by 15% from 2005 as a base year	Capital Power has sent emissions intensity targets of 10–50% reduction on a plant-by-plant basis	Gildan set a target to reduce GHG emissions intensity by 20% by 2015 from a 2010 baseline  The company has reduced intensity by 32% surpassing its targets two years early	TD intends to reduce GHGs by 1 tonne per employee by 2015, relative to its 2008 intensity of 3.58 tonnes per person (a 28% reduction)	Goldcorp set an intensity target of 20% reduction in metric tonnes CO <sub>2</sub> e per kilotonne of material mined and moved

Targets are only half of the climate change abatement equation; corporate progress in mitigating emissions must also meet or exceed targeted year-over-year reductions. However, the average emissions reduction progress of companies in Canada was behind schedule. Companies vying to reach their absolute and intensity targets reported 70% progress by time compared to 65% progress by emission reduction (metric tons CO<sub>2</sub>e).

**52%**  
of all CDP responding companies reported an increase in emissions compared to the previous year.

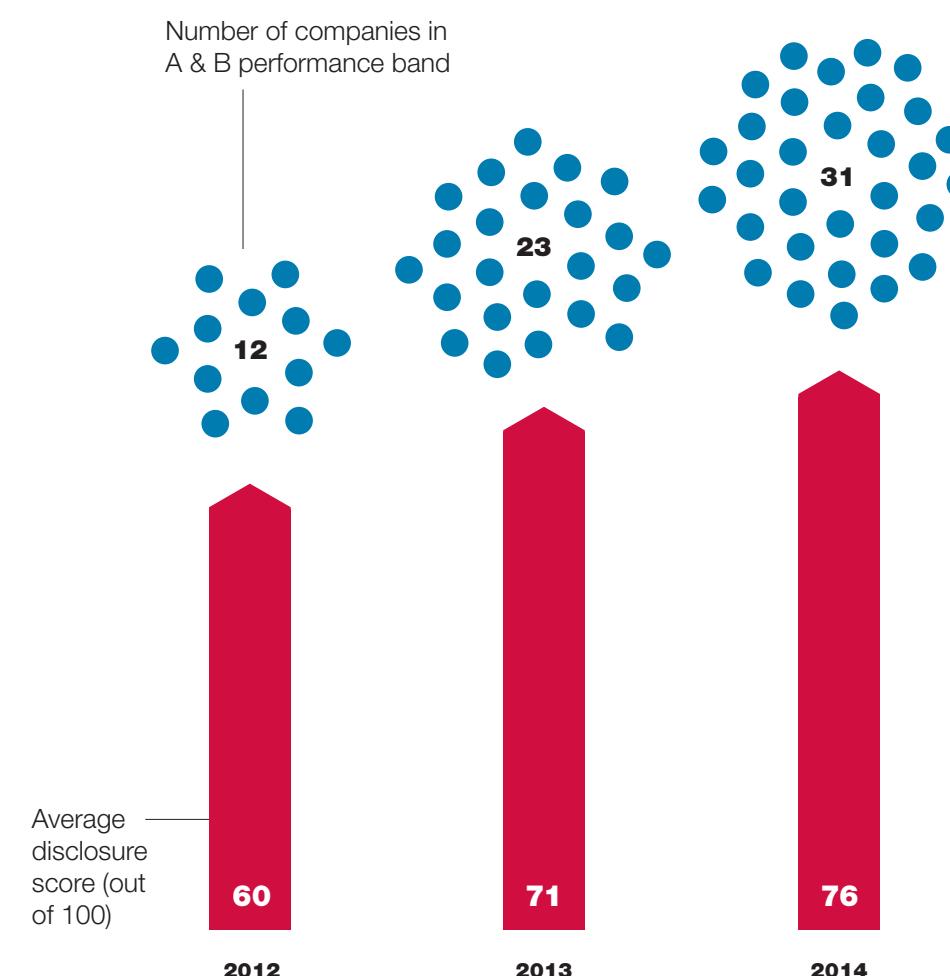
On average, CDP responders are 5% behind on the pace of their carbon reduction pathways. Additionally, 52% of all CDP responding companies reported an increase in emissions compared to the previous year. This data shows that Canadian companies are not on track to meet their emissions reduction targets or the Canadian aggregate target by 2020.

Despite higher Scope 1 and 2 emissions overall, companies reporting to CDP have taken a step in the right direction to mitigating emissions and building climate resilience. In total, they reported more than a 10% increase in their emissions reduction activities compared to the initiatives by those same companies in 2013. This further demonstrates that Canadian companies have reduced their emissions compared to a scenario where they did nothing (i.e. business as usual) shown in Figure 1 above. In addition, the majority of CDP responding companies (53%) stated that proactive emissions reduction activities were responsible for reducing Scope 1 and 2 emissions, as opposed to changes in business conditions. Without emissions reduction activities, companies would neither meet their targets nor build resilience to climate impacts.

While only about half of Canadian companies have reduced their carbon footprint year-over-year, the majority implemented emission mitigation activities, with varying degrees of success. Overall, companies have done a better job of disclosing their emissions to CDP in 2014 and making progress toward their emissions reduction goals. Both average disclosure scores and the number of top performing companies have risen relative to the 2012 and 2013 reporting years (see Figure 5).

Canadian companies can drive their GHG mitigation efforts further by focusing on initiatives that both reduce emissions and build resilience. This allows companies to optimize the value of their investments by tackling both emissions reductions and climate change resilience simultaneously. The subsequent sections of this report outline how mitigation efforts can be coupled with resilience-building for a win-win situation that will help companies maintain long-term profitability.

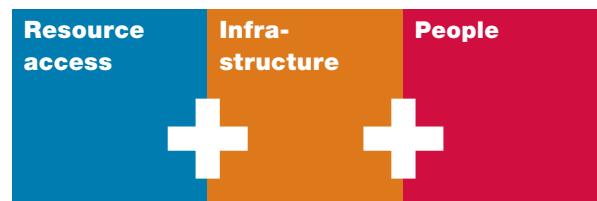
**Figure 5: Average disclosure scores and number of top performing companies**



## Building resilience to climate change

**While many corporations have built resilience or adapted to climate change, only select companies have combined their emissions mitigation efforts with resilience building.**

According to Accenture's recent thought leadership publication, "Climate Resilience Strategy: Using Digital to Tackle Organizational Risk Management," climate change resilience can be divided into three pillars: resilience for people, resource access, and infrastructure. CDP further analyzes each resilience pillar from business operations and supply chain perspectives. By doing so, we can examine what companies do after a climate change disaster to continue operating normally and to ensure that they have adequate resources. Companies can also leverage this framework to better understand their own resilience-building activities, identify win-win opportunities, and learn from best practices highlighted in the case studies that follow.



### Resource access

Business operations depend on water, gas, electricity, and other resources to function. However, climate-related impacts can cause resource shortages and infrastructure stress that hampers resource access. Such effects might include drought that limits water supply or extreme heat that leads to peak load events and causes brownouts. Corporations can increase resource-use efficiency and diversify their supply chain to minimize the climate-related short and long-term impacts of resource scarcity and price hikes. For a company's resource-access supply chain, resilience can be defined as obtaining resources without risk of supply disruption (i.e. self-generation of electricity). Resilience for a company's resource access operations means using the resources efficiently or conserving resources.

### Infrastructure

From buildings to communication networks and transportation, infrastructure is vital to the normal operations of businesses and cities. Successful resilience strategies can include smart infrastructure and information technology solutions (i.e. big data analytics, smart buildings, etc.), physical retrofits or weatherization of buildings. From a supply chain perspective, infrastructure resilience can be defined as system redundancy that enables business activity despite a climate effect. Operationally speaking, infrastructure resilience refers to the ability to quickly resume organizational function of the infrastructure after a climate event.

### People

Without shutting down business, companies need to ensure the safety of their employees and customers. In the context of supply chain, resilience for a company's people means enabling the safety and comfort of a workforce during a climate event, whereas resilience for a company's people in an operations context means enabling employees to get back to work safely and efficiently. Examples of activities that build resilience of a company's workforce include: teleworking or remote work opportunities, building management systems that enable comfort and energy optimization, and risk management systems that alert people to potential climate effects and subsequent security measures.

Companies highlighted in Figure 6 demonstrate in their CDP responses that they have built resource access, people, and infrastructure resilience measures into their emissions reduction activities. Select case studies follow that explain the three pillars and tie resilience to operations and supply chain perspectives.

**Figure 6: GHG mitigation and resilience categories by company**

Company	Sector	Resilience category		
		Resource access	Infrastructure	People
Air Canada	Consumer Discretionary	○		
General Motors	Consumer Discretionary	○	○	
TD Bank Group	Financials	○	○	○
Bank of Montreal	Financials	○	○	
Boardwalk REIT	Insurance	○		
JDS Uniphase	Information technology	○		
CGI Group Inc.	Information technology	○	○	○
BCE Inc.	Telecom	○		
Emera Inc.	Energy/Utilities	○		○
Suncor Energy	Energy/Oil & gas	○	○	
ARC Resources Ltd.	Energy/Oil & gas	○		
Resolute Forest Products	Materials	○	○	
SNC Lavalin	Engineering		○	○
Metro Inc.	Food and staples	○	○	

## GHG mitigation and resilience case studies

### Resource access—operations: Air Canada

**Target:** 50% absolute reduction by 2050 and 1.5% fuel efficiency improvement from 2009-2020

**Estimated annual CO<sub>2</sub>e savings:**  
1.4 million metric tons

**2014 self-reported emissions:**  
9.0 million metric tons

Air Canada reduced its Scope 1 emissions through several behavioral initiatives, including:

- 1) coaching fuel suppliers not to over-fuel airplanes unnecessarily,
- 2) optimizing standard operating procedures so that pilots switch off the aircraft's alternative power unit when connected to airport power,
- 3) working with pilots to taxi to and from the runway with one engine shut down, and
- 4) determining the best frequency at which to wash engines to balance costs.

These behavioral initiatives conserved the fleet fuel use, thereby reducing emissions and securing Air Canada against shortage or price hikes in jet fuel that could be caused by climate events.

### Resource access—supply chain: Suncor Energy

**Target:** 10% intensity reduction by 2015 from 2008 levels

**Estimated annual CO<sub>2</sub>e savings:**  
27.9 thousand metric tons

**Scope 1 & 2 emissions:**  
20.5 million metric tons

Suncor Energy is constructing an oil sands wastewater treatment plant that will reduce river water withdrawal by 65%. The company has taken measures to use reclaimed water from tailings ponds for operations, instead of relying exclusively on freshwater resources. In the event of extreme drought, this would allow Suncor to reuse its own water with significantly improved resource efficiency. In doing so, Suncor is able to reduce its emissions and ensure its water supply chain remains intact.

### Infrastructure—operations: Bank of Nova Scotia

**Target:** No formal target reported, planned 1–5% yearly reduction over next 5 years

**Estimated annual CO<sub>2</sub>e savings:**  
1.3 thousand metric tons

**Scope 1 & 2 emissions:**  
122.7 thousand metric tons

Scotiabank implemented remote monitoring across five locations to reduce or avoid Scope 2 emissions. Building mechanical and electric equipment can now be controlled and monitored in real time by facilities managers from a centralized location. In addition, the bank implemented Green Globes building standards at all new locations to maximize energy efficiency in building fabric and processes. These activities reduce Scotiabank's GHG emissions and build resilience by enabling managers to quickly and remotely control infrastructure in the event of a climate disaster.

### Infrastructure—supply chain: Bank of Montreal

**Target:** Maintain carbon neutrality, 10% absolute reduction by 2017 using 2012 as base year

**Estimated annual CO<sub>2</sub>e savings:**

3.0 thousand metric tons

**Scope 1 & 2 emissions:**  
110.5 thousand metric tons

Bank of Montreal (BMO) has an ongoing program to consolidate office facilities in safe locations (i.e. moving offices away from floodplains, fault zones, or coastal regions that are threatened). In addition, the bank is introducing new standards to minimize the physical space per employee. BMO employees now have the option to take advantage of mobile workplace arrangements in the event that commuting to the office is dangerous or impossible. These initiatives reduce BMO's GHG emissions and increase resilience by 1) allowing work to continue through teleworking and 2) reducing the number of buildings threatened by climate effects.

### People—operations: SNC-Lavalin Group

**Target:** Absolute target for 2014 of 2000 tons of CO<sub>2</sub>e from office activities

**Estimated annual CO<sub>2</sub>e savings:**  
2.1 thousand metric tons

**Scope 1 & 2 emissions:**  
10.7 thousand metric tons

More than 5 million hours of work were lost due to the flooding in Calgary, resulting in \$485 million in lost economic output by the private sector and lost income for Canadians. For SNC-Lavalin, more than 1000 employees were affected by the evacuation of the downtown area. SNC-Lavalin enabled employees to telework, which prevented more than 32,000 working hours from being lost during that time. In addition, SNC-Lavalin established a "global safety" team to continuously assess security risks confronting employees, facilities and/or property, and implemented new evacuation response procedures. SNC-Lavalin is also in the process of consolidating office locations that are being underutilized. These activities enable SNC-Lavalin to reduce its emissions and build people-focused resilience. By providing telecommuting options for employees, SNC-Lavalin minimizes downtime caused by climate events and enables employees to resume work activities quickly.

### People—supply chain: TD Bank

**Target:** Maintain carbon neutrality, reduce emissions per employee by 28% by 2015 relative to 2008 levels

**Estimated annual CO<sub>2</sub>e savings:**  
122.2 thousand metric tons

**Scope 1 & 2 emissions:**  
207.4 thousand metric tons

TD Bank has digitally enabled its organization by adding building management systems and risk management alert systems to its offices. This helps to ensure building systems are running properly, helping preserve occupant comfort and optimize energy consumption. These IT systems also foster communication with employees and customers during climate events. This builds people-focused resilience capabilities from a supply chain standpoint, ensures the safety and comfort of occupants, and helps reduce energy consumption, and thus emissions, from facilities.

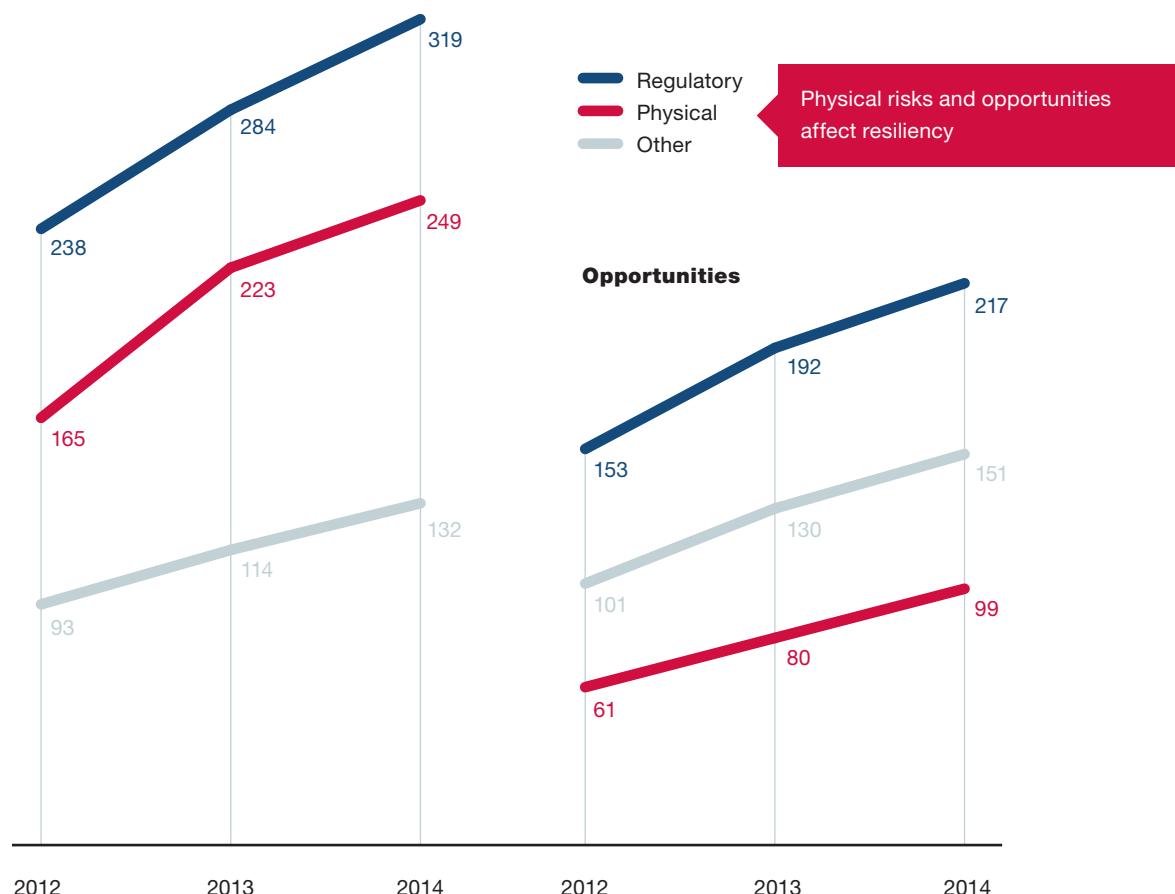
## Responding to increased climate risks with resilience planning

**Companies view emissions mitigation as an opportunity to reduce operational costs and sell new products and services. Compared to the previous reporting year, CDP responders reported an increasing number of physical risks (up 12%) and opportunities (up 24%) from climate change.**

The number of direct risks to corporate operations increased by 12%, whereas indirect supply chain risks increased by 24% compared to the previous year. In addition, CDP responding companies have acknowledged the high likelihood of climate impacts: 47% of physical risks reported for 2014 were “likely,” “very likely,” or “virtually certain,” compared to 43% the previous year. This increase in number and likelihood

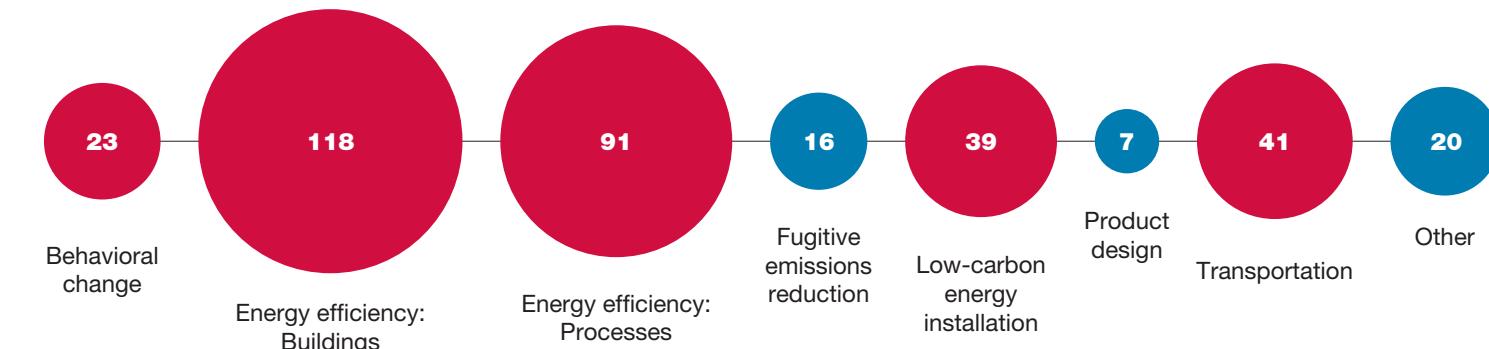
of physical risks makes building resilience to pending climate events even more important for companies. However, the data also suggests that companies may not be as concerned about the short-term physical risks of climate change as they should be: 17% of physical risks reported had a timeframe of “less than 1 year,” compared to 34% of physical risks the previous year that had a timeframe of “current.”

**Figure 7: Responders reporting risks and opportunities by type**



**Figure 8: Number and type of initiatives implemented during the reporting year**

● Initiatives that can improve resilience



However, Canadian corporations are increasingly aware of the opportunities to create business value for themselves and for their customers. In spite of the dangers of ice destroying electrical generation infrastructure, utility company TransAlta, for example, transitioned to selling renewably generated power to customers and installed de-icing equipment on its wind turbines. Similarly, WSP Group, an engineering company, has profited from its smart city, distributed generation, and “urban microclimate” offerings. Distributed infrastructure and data connectivity enable corporations and cities to generate their own power and remain connected in the event that a climate event results in a massive blackout.

Other business opportunities from climate change would include selling weatherization materials for buildings, efficient HVAC equipment and appliances, renewably generated electricity, and insurance products or loans from financial institutions. These examples demonstrate that companies may indeed benefit from a national effort to make reductions by selling new products and services.

Many other responding companies are capitalizing on climate change opportunities—and they have implemented nearly 300 improvement initiatives designed to mitigate emissions.

While companies may not be aware of the resilience benefits, more than 80% of their emissions reduction initiatives have a strong positive impact on climate change resilience. Self-reported initiatives that can improve resilience include: behavioral change, building energy efficiency, process energy efficiency, low-carbon energy installation/purchase, and transportation (see Figure 8). Transportation and low-carbon energy initiatives, in particular, may lend themselves well to public-private cooperation on emissions mitigation and resilience building.

In addition to acknowledging win-win opportunities, companies should identify which initiatives will be most effective given their current mix of emissions reduction activities. For instance, Air Canada curtailed more than 1 million metric tons of emissions and realized more than \$1 million dollars in savings from low-cost behavioral changes. Subsequent initiatives, however, may require Air Canada to invest in more expensive activities to achieve the same amount of emissions reductions.

## Cost of mitigation

**Analysis has shown that Canadian companies will need to invest approximately \$53.62 for every 1 metric ton of CO<sub>2</sub>e emission reduction desired.**

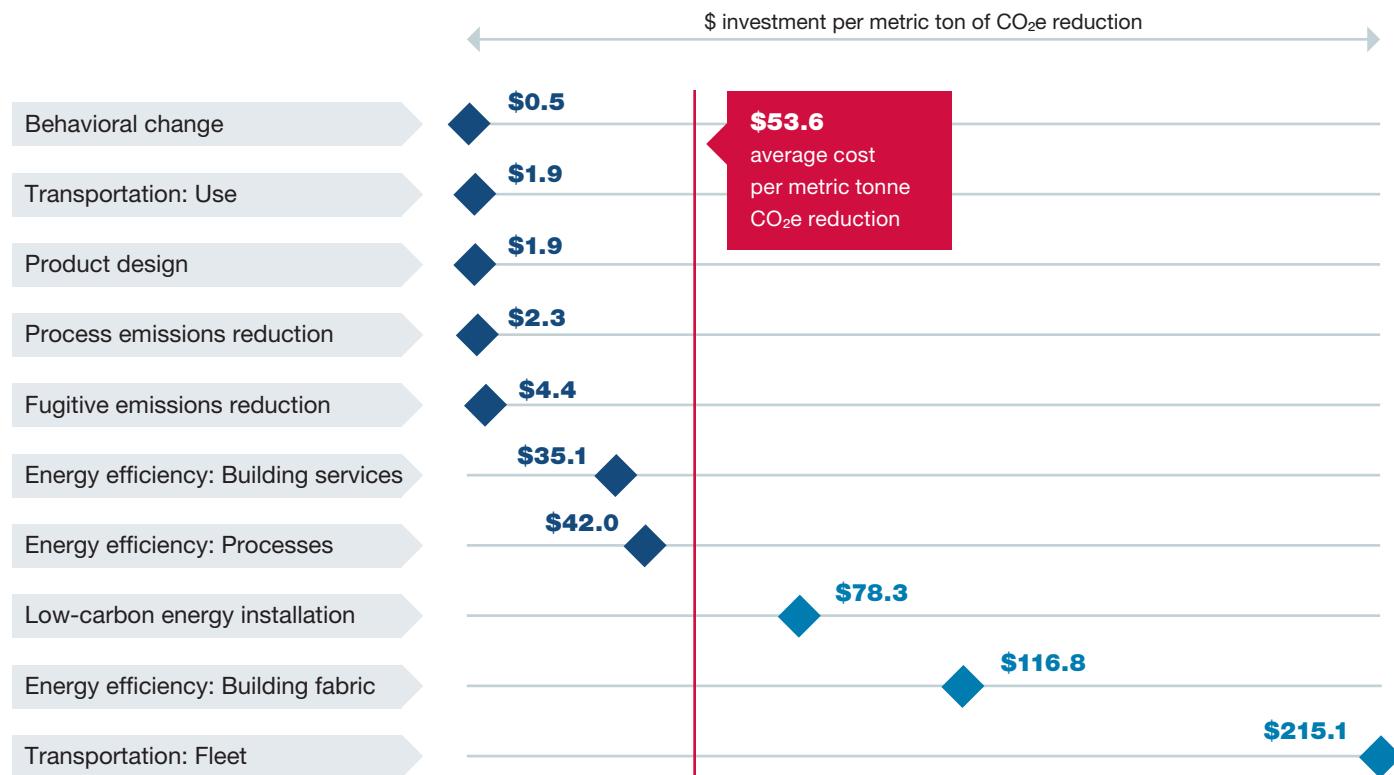
This estimate is derived from a blended average of the dollars per metric ton CO<sub>2</sub>e abated for each emission reduction initiative, as shown in Figure 9. By understanding the cost and return on investment of emissions reduction initiatives, companies can identify low-cost initiatives without sacrificing longer term, deeper emissions cuts.

Being able to accurately predict emission reduction per dollar invested is a best practice, which enables companies to budget for climate change transparently and deliver well-planned, coordinated efforts with customers, vendors, and policy makers. Using reported

corporate progress data and the \$53.62 per ton average, Figure 10 estimates the investment needed for select companies to close the gaps in their emission reduction targets.

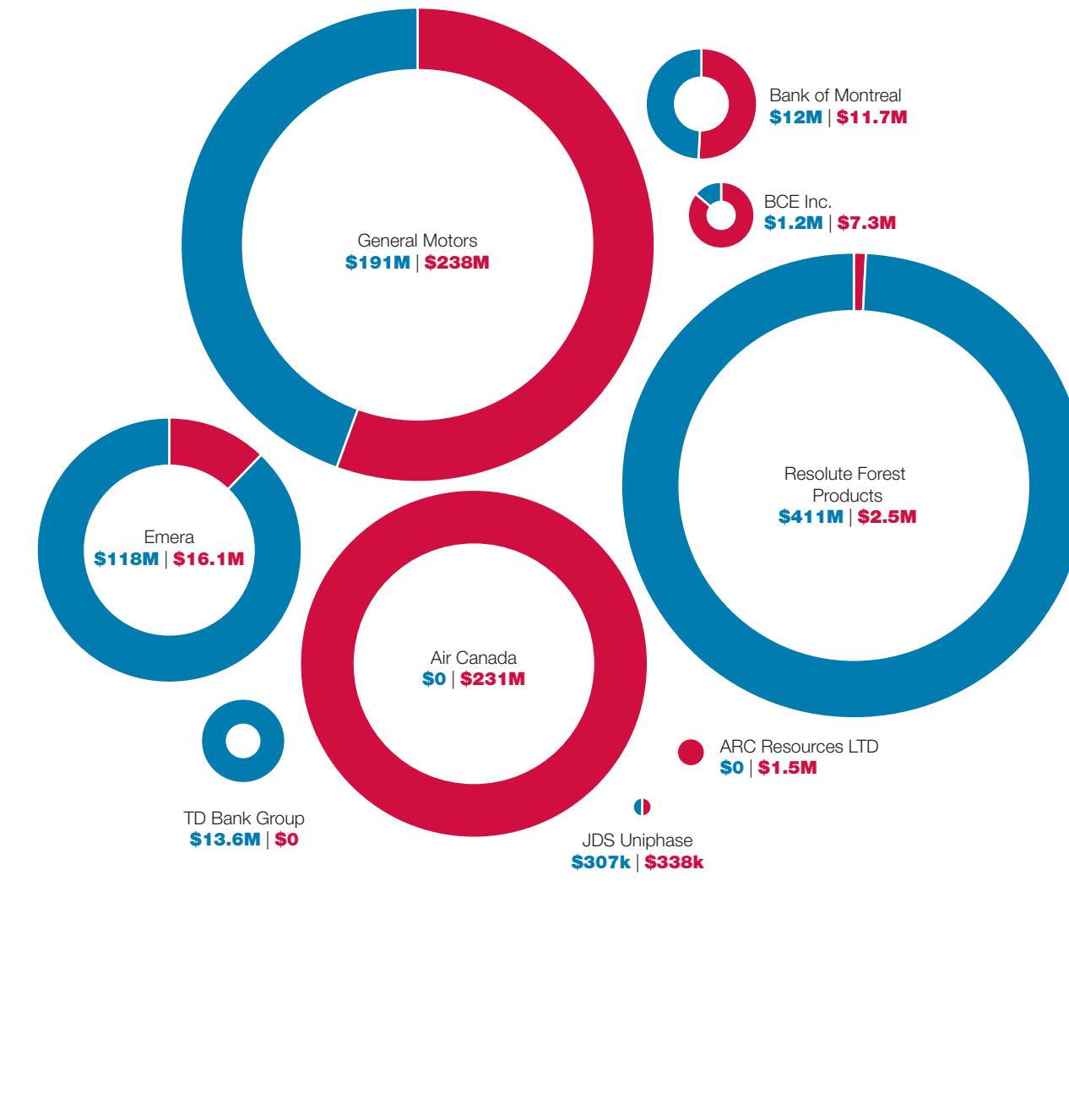
Ultimately, companies will be better equipped to achieve their targets if they can estimate accurately the cost to reduce emissions and build resilience. However, the average cost of emission reduction is evolving and could change based on a number of factors—emerging public policy incentives, development of carbon markets, availability of offsets that meet additional criteria, and breakthrough low-carbon technologies.

**Figure 9: Dollars per Metric Ton CO<sub>2</sub>e Abated by Initiative Type**



**Figure 10: Emission reductions (Mt CO<sub>2</sub>e) and investment estimates needed to meet targets**

- Emissions reduction investment to date
- Investment needed to meet target



## Resilience best practices: High-level corporate responsibility for climate change strategy

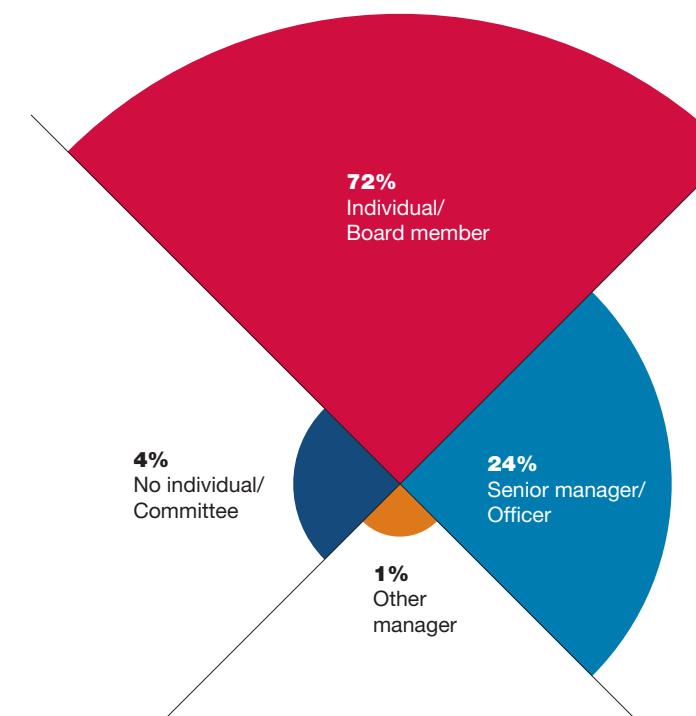
### The overwhelming majority of Canadian corporations are leveraging strong governance and corporate strategies.

The overwhelming majority of Canadian corporations are leveraging strong governance and corporate strategies. More than 104 companies responding to CDP (96%), for example, have granted a senior officer or board member direct responsibility for dealing with climate change risks and opportunities; and more than 78 (72%) provide financial and non-financial incentives for managing climate change issues (see Figure 11). Corporations may be more likely to define a climate agenda that includes resilience when climate change management is a C-Suite level responsibility. Leading companies go so far as to tie executive compensation to meeting carbon reduction targets, which further demonstrates that corporate leaders in Canada are making climate change abatement a primary strategic issue.

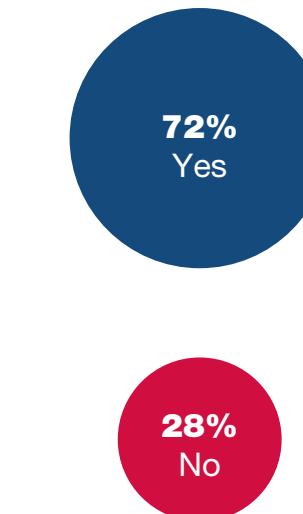
In addition, forward-looking companies are more successful at predicting and mitigating climate-related risks early, before they become real threats to business operations. To this end, CDP responding companies assess climate change risks and opportunities at least annually, if not more frequently (88%), and forecast at least three to six years into the future in their assessments (62%) (see Figure 12). Furthermore, companies worldwide have begun to recognize that mitigation and resilience-building activities are less expensive than adaptation processes after a climate event has already caused financial losses.<sup>16</sup> Monitoring climate-related risks and opportunities with a vision for the future has thus become essential for corporations to maintain their business value.

**Figure 11: Climate change governance and incentives**

**Where is the highest level of direct responsibility for climate change within your organization?**

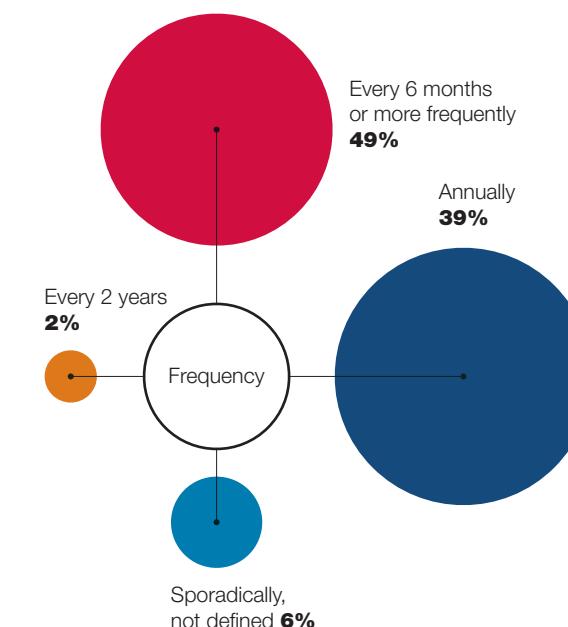


**Do you provide incentives for the management of climate change issues, including the attainment of targets?**

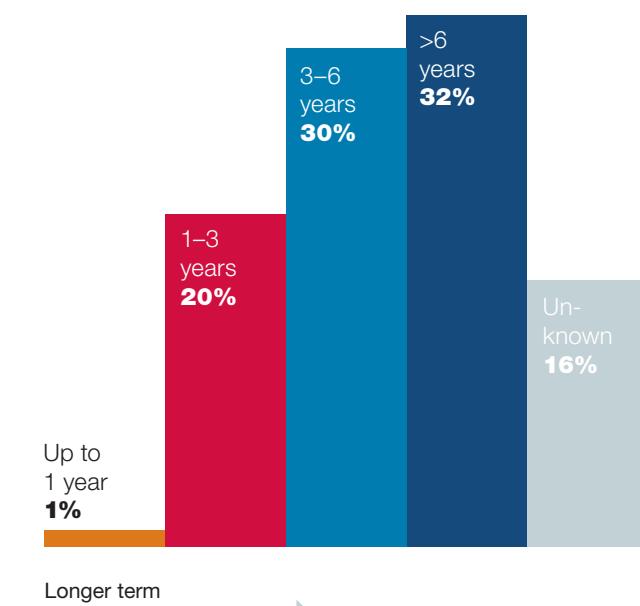


**Figure 12: Climate change strategy**

**Frequency of monitoring climate change risks and opportunities**



**How far into the future are risks considered?**



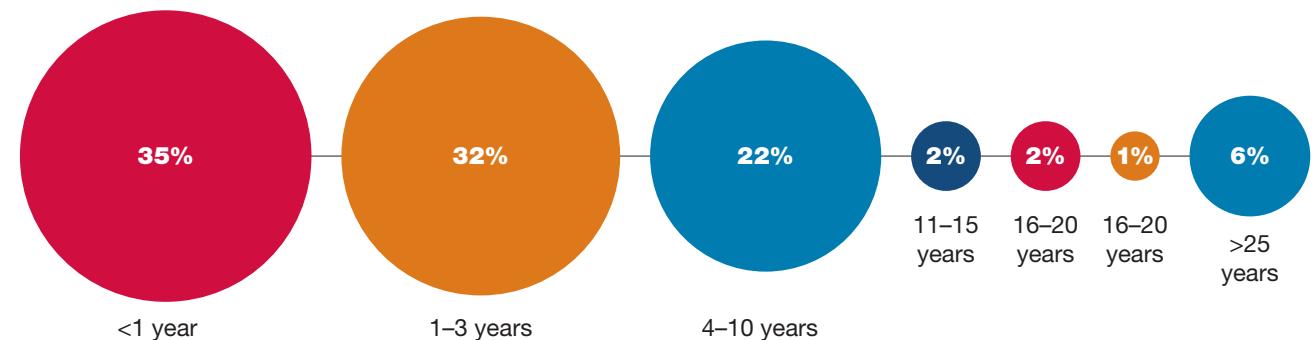
Another trend among Canadian corporations is the payback time of their investments in emissions mitigation initiatives. Canadian corporations prefer GHG mitigation efforts to be short-term payback or “quick win” projects. In fact, more than two-thirds of companies’ emissions reduction initiatives have short-term payback times (<1 year to 3 years) (see Figure 13).

The advantage of a short payback period is that available capital can be re-invested for resilience purposes. Also, financially stable organizations that invest in projects with short-term paybacks have more liquidity and greater resilience to disaster, considering the flexibility this affords. However, corporations should be careful not to implement only short-term initiatives and rather identify the maximum business value attainable from mitigation and resilience win-win activities.

▼▼ Despite the grave physical impacts of climate change, it is estimated that “every dollar invested in climate change prevention—weather resistant buildings for example—will yield \$9–\$38 worth of avoided costs in the future.” ▼▼

—TD Economics

**Figure 13: Average payback time of Canadian investments in emission reduction initiatives**



## Turning resilience into win-wins

**In spite of these best practices, too often companies are approaching resilience separately from emissions mitigation. Companies may be better equipped to leverage GHG emissions reduction for a win-win opportunity with resilience.**

For example, a company that mitigates physical risks by diversifying its global supply chain (resilience) could also leverage teleworking opportunities and identify emissions reduction targets with their vendors (mitigation and resilience). Similarly, a company with emergency response planning procedures to address extreme weather (resilience) could leverage early warning systems to alert employees to pending weather dangers and enable remote work opportunities (mitigation and

resilience). Finally, a company with risk management and business continuity teams (resilience) might task each team with specific emissions reduction activities and tie emissions mitigation to its corporate risk management strategy (mitigation and resilience). If corporations can identify opportunities to invest in resilience measures and mitigate emissions, they can successfully maximize the potential value of their original investment in climate change abatement.

## Resilience, business continuity and risk management

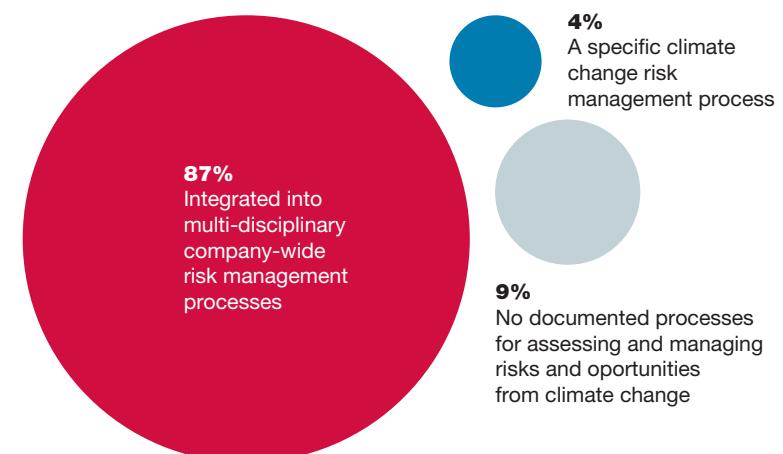
**Some Canadian corporations isolate emission mitigation from resilience, whereas others view resilience from a narrow lens of conventional business continuity and risk management.**

Climate impacts on an organization have traditionally been viewed as unmanageable because it is difficult to measure—hence the association with business continuity. Too often corporations focus only on preventing disruptions to business as usual, instead of viewing GHG mitigation as a potential opportunity.

Moreover, companies rely too heavily on an historical picture of risk, which may underestimate the changing climate and future risks. For example, 87% of responding companies manage GHG emissions as part of a corporate risk management process (see Figure 14). Risk management may struggle to understand the likelihood, frequency, or severity of weather events, which remains a significant barrier for companies deciding how to invest in resilience building beyond “business as usual.”<sup>17</sup> In addition to continuing operations, companies should strive to reduce operational inefficiencies and sell more products and services. Managing climate change as risk and opportunity will enable corporations to maximize shareholder value and minimize potential losses from weather events.

**Figure 14: Climate change as risk management**

**Please select the option that best describes your risk management procedures with regards to climate change risks and opportunities**



A company’s customers may also approach emissions management through risk management. Those prone to climate-related impacts make less attractive investments to financial entities, which are beginning to factor climate change into their lending practices. Also, as part of their risk management processes, companies and customers need to have clearer guidelines to address resilience and mitigation. One option is to tie resilience and emissions mitigation initiatives to performance metrics and evaluate the impact of their investments.

Another option for companies is to leverage risk management budgets for emissions reduction activities. By making the case for mitigation and resilience as a win-win, companies can tap into risk management budgets to close the gap in their emissions reduction targets and build resilience. However, too often companies do not have an accurate gauge of the investment dollars needed in order to achieve their stated absolute or intensity targets. Estimating the cost of emissions reductions enables companies to close the gap in their absolute/intensity targets, leveraging both risk management and carbon abatement budgets together.

<sup>17</sup> Crawford, Meg and Stephen Seidel, Center for Climate and Energy Solutions, “Weathering the Storm: Building Business Resilience to Climate Change,” July 2013. <http://www.c2es.org/docUploads/business-resilience-report-07-2013-final.pdf>

## Resilience and policy engagement

**Corporate engagement with policy makers on resilience strategies is underrepresented. Currently, only four companies stated that they are engaging policy makers on adaptation and resilience, which constitutes just 4% of the policy issues related to climate change.**

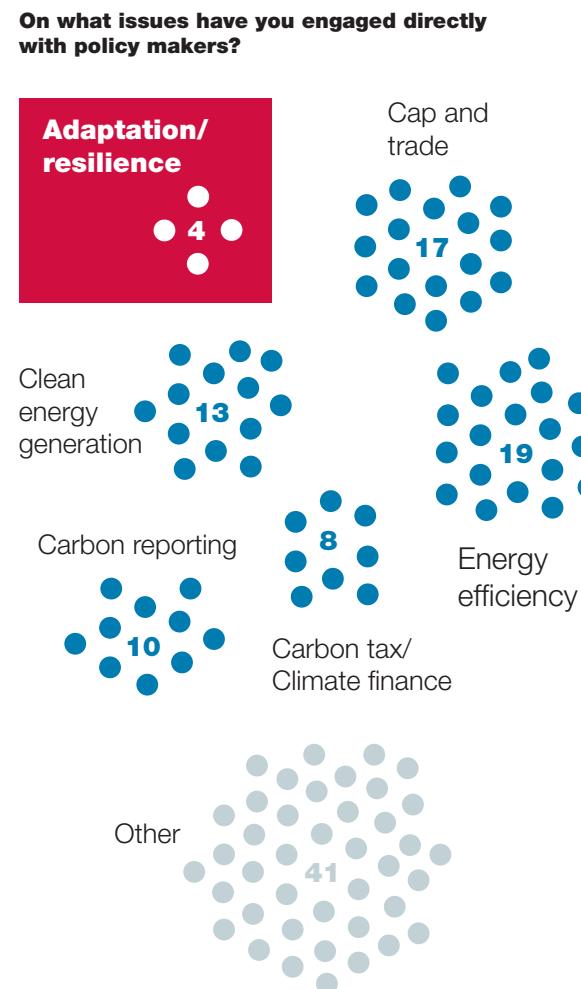
This data demonstrates that companies may not fully acknowledge the correlation between emissions reductions and climate resilience, as doing so would likely lead to more frequent and robust efforts from companies to engage policymakers on this issue. However, a select few companies have been engaging policy makers on the topic of climate change resilience, primarily through board membership and publications. Stantec, for example, completed research and recommendations on building community adaptive capacity to climate change. The Vice President of Sustainable Development sits in an advisory role on climate change within Nova Scotia's Department of the Environment. Similarly, Capital Power Corporation joined the Canadian Electricity Association (CEA), which created a working group to identify best practices for adapting to climate change. Intact Financial advocates for climate change initiatives with Canadian governments and through the Insurance Bureau of Canada (IBC).



The severe weather events of the past year have reinforced our belief and conviction that Canada, as a society, must adapt to the new climate reality and ensure that our cities, communities, infrastructure and buildings are resilient to climate change. Adapting to climate change is a multi-stakeholder endeavor that will require the active participation of the industry, consumers, NGOs and governments. For this reason, we directly advocate for climate change adaptation policies and initiatives to Canadian governments at all levels and with the Insurance Bureau of Canada (IBC) and the University of Waterloo.

**-Intact Financial**

**Figure 15: Climate change and policy engagement**



## Conclusions

**CDP disclosures in 2014 show that Canadian companies are making efforts to address and prepare for business interruptions resulting from climate change. Moreover, the data illustrates an increasingly high level of corporate leadership paying attention to these issues, as climate change policies become more the purview of board members and senior corporate officers.**

Despite these efforts, many companies are falling short of their emissions reduction targets and do not appear to be engaging with policy makers on climate resilience strategies.

By conducting resilience analysis across the pillars of resource access, infrastructure and people, and looking further at operational and supply chain components, we find that Canadian companies can build climate resilience and effectively mitigate their GHG emissions in tandem.

Next steps for companies include identifying pre-existing emissions reduction projects and understanding how they could already be related to or augmented to become climate resilience building initiatives. These win-win opportunities enable corporations to avoid financial loss from climate events, decrease their carbon footprint for the future, and preserve long-term value for shareholders.

## Disclosure leaders

Climate Disclosure Leadership Index

Company	Score	Years on Canada 200 CDLI
<b>Consumer discretionary</b>		
Canadian Tire Corporation, Limited	92	New
General Motors Company	100	New
Thomson Reuters Corporation	98	▼▼
<b>Energy</b>		
ARC Resources Ltd.	93	▼▼▼▼
Cenovus Energy Inc.	98	▼▼▼▼
Suncor Energy Inc.	95	▼▼▼
TransCanada Corporation	99	▼▼
<b>Financials</b>		
Bank of Montreal	94	▼▼▼▼
Great-West Lifeco Inc.	98	New
IGM Financial Inc.	96	New
TD Bank Group	99	▼▼

Company	Score	Years on Canada 200 CDLI
<b>Industrials</b>		
Air Canada	93	New
Bombardier Inc.	95	▼▼
Canadian National Railway Company	93	▼▼▼▼
Canadian Pacific Railway	95	New
Stantec Inc.	94	▼▼▼▼
WSP	92	New
<b>Information technology</b>		
Celestica Inc.	94	New
JDS Uniphase Corp.	92	▼▼
<b>Materials</b>		
Teck Resources Limited	95	▼▼
<b>Telecommunications services</b>		
BCE Inc.	96	▼▼
Telus Corporation	92	▼▼

## Appendix I

Scores, emissions, and company detail by sector

Company	Ticker	2014 score	2013 score	Scope 1 emissions	Scope 2 emissions	Target(s) reported	Verification/assurance
<b>Consumer discretionary</b>							
Aimia Inc.	AIM	89 C	82 D	1,055	5,129	① ② ③	
Brookfield Residential Properties Inc	BRP	SA	SA	See parent company—Brookfield Asset Management Inc.			
Canadian Tire Corporation, Limited	CTC/A	92 B	79 D	39,688	51,089	abs	
Cogeco Cable Inc	CCA	86 C	78 C	5,536	7,637	abs int	
General Motors Company	GM	100 A	100 A-	2,802,461	5,613,573	abs int	① ② ③
Gildan Activewear Inc.	GIL	57 D	67 C	Response not public			
Hudson's Bay Co.	HBC	80 D	DP	Response not public			
Magna International Inc.	MG	61 E	63 E	440,078	1,196,940		
Quebecor Inc.	QBR/B	77 D	71 D	20,605	8,457	① ②	
RONA inc.	RON	59 E	50 E	Response not public			
Thomson Reuters Corporation	TRI	98 A-	95 B	23,789	414,816	abs	① ② ③
Tim Hortons Inc.	THI	91 B	88 B	34,056	5,532	int	① ②
<b>Consumer staples</b>							
Canada Bread	ACQU	SA	x	See parent company—Maple Leaf Foods Inc.			
Empire Company Limited	EMP/A	AQL	57 D	Answered questionnaire late			
George Weston Limited	WN	69 D	60 D	84,504	91,344	int	
Loblaw Companies Limited	L	64 D	57 D	Response not public			
Maple Leaf Foods Inc.	MFI	62 D	65 E	Response not public			
Metro Inc.	MRU	82 C	81 C	Response not public			
Saputo Inc.	SAP	72 D	70 D	355,006	297,172	① ②	
Shoppers Drug Mart Corporation	ACQU	66 D	59 C	Response not public			
<b>Energy</b>							
AltaGas Ltd.	ALA	78 C	69 D	Response not public			
ARC Resources Ltd.	ARX	93 B	95 B	643,647	402,479	abs int	① ②
Baytex Energy Corp.	BTE	81 D	68 D	1,020,570	48,286		
Bonavista Energy Corporation	BNP	65 D	73 D	1,164,172	110,133	int	
Cameco Corporation	CCO	80 C	64 D	192,119	327,470	int	
Canadian Natural Resources Limited	CNQ	AQL	66 D	Answered questionnaire late			
Canadian Oil Sands Limited	COS	31	30	12,461,927	—	①	
Cenovus Energy Inc.	CVE	98 B	94 B	4,949,842	996,441	int	① ②
CNOOC	883	9	22	Response not public			
Crescent Point Energy Corporation	CPG	83 D	78 D	1,401,863	514,035		
Ecopetrol Sa	ECOPETL	61 C	48	7,730,898	303,246	abs	
Enbridge Inc.	ENB	89 C	85 C	2,692,000	3,047,000	int	①
Encana Corporation	ECA	79 C	80 C	4,788,382	439,023	①	
Enerplus Corporation	ERF	85 C	86 C	616,536	229,564		
Husky Energy Inc.	HSE	91 B	86 C	11,270,000	2,450,000	int	①
Imperial Oil	IMO	65 D	62 D	10,495,008	1,578,680	①	
Keyera Corp.	KEY	55 D	75 D	1,707,892	346,089	int	①
Lundin Petroleum	LUPE	90 B	86 C	18,017	2,715		
Pacific Rubiales Energy Corp.	PRE	79 B	77 C	Response not public			
Pengrowth Energy Corporation	PGF	80 C	78 B	1,115,759	653,626	int	①
ShawCor Ltd.	SCL	59 D	65 D	63,300	66,700	int	
Suncor Energy Inc.	SU	95 B	94 B	18,982,272	1,552,312	int	① ②
TransCanada Corporation	TRP	99 A-	91 B	12,195,689	199,020	abs int	① ② ③
Trican Well Service Ltd.	TCW	73 E	64 E	324,973	10,113		
Vermilion Energy Inc.	VET	87 B	NR	310,285	79,309	abs	① ② ③

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Scores, emissions, and company detail by sector

Company	Ticker	2014 score	2013 score	Scope 1 emissions	Scope 2 emissions	Target(s) reported	Verification/assurance
<b>Financials</b>							
Bank of Montreal	BMO	94 B	94 B	24,227	86,321	abs	① ② ③
Bank of Nova Scotia (Scotiabank)	BNS	91 B	72 C	17,426	105,261		① ② ③
Boardwalk REIT	BEI-U	72 E	65 E	0	208,768		
Brookfield Asset Management Inc.	BAM/A	57 D	63 D	45,718	777,661		
Brookfield Canada Office Properties	BOX-U	SA	SA	See parent company—Brookfield Asset Management Inc.			
Brookfield Office Properties Inc.	ACQU	SA	SA	See parent company—Brookfield Asset Management Inc.			
Brookfield Property Partners	BPY-U	SA	x	See parent company—Brookfield Asset Management Inc.			
Canadian Imperial Bank of Commerce (CIBC)	CM	73 C	61 D	23,002	44,557		
Canadian Western Bank	CWB	AQL	16	Answered questionnaire late			
First Capital Realty Inc.	FCR	73 C	73 D	10,150	23,625	abs	① ② ③
Genworth MI Canada Inc.	MIC	SA	SA	See parent company—Genworth Financial, Inc.			
Great-West Lifeco Inc.	GWO	98 B	67 B	10,988	14,578	abs	① ② ③
IGM Financial Inc.	IGM	96 B	84 C	2,275	27	abs int	① ②
Industrial Alliance Insurance and Financial Services Inc.	IAG	72 D	66 D	334	102		
Intact Financial Corporation	IFC	91 C	86 D	6,969	9,026		
Manulife Financial Corp.	MFC	90 C	84 C	197,190	274,056	int	
National Bank of Canada	NA	67 D	77 B	2,966	4,259	int	
Power Corporation of Canada	POW	91 B	86 B	1,869	2	abs	
Power Financial Corporation	PWF	91 B	86 C	2,018	2	abs	②
Sun Life Financial Inc.	SLF	82 D	69 C	32,088	30,135		
TD Bank Group	TD	99 A	94 A	49,385	157,996	abs int	① ② ③
TMX Group Limited	X	80 D	72 D	1,085	2,715		

Industrials							
Air Canada	AC	93 B	x	9,013,681	10,491	abs int	①
Bombardier Inc.	BBD/B	95 A	93 B	155,483	160,761	abs int	① ②
CAE Inc.	CAE	AQL	CR	Answered questionnaire late			
Canadian National Railway Company	CNR	93 A	91 B	5,220,949	183,378	int	① ② ③
Canadian Pacific Railway	CP	95 A-	72 D	3,313,501	92,835	int	① ② ③
Finning International Inc.	FTT	48	47	42,765	33,393		
Progressive Waste Solutions Ltd.	BIN	90 C	87 B	2,628,395	23,898	① ② ③	
Ritchie Bros. Auctioneers Incorporated	RBA	82 D	77 D	14,765	7,139	① ②	
Russel Metals Inc.	RUS	69 E	66 D	35,580	22,953		
SNC-Lavalin Group Inc.	SNC	89 C	69 D	2,266	8,451		
Stantec Inc.	STN	94 B	88 C	11,691	32,083	int	① ② ③
Toromont Industries Ltd.	TIH	49	38	Response not public			
WestJet Airlines Ltd.	WJA	27	NR	—	—	int	
WSP	WSP	92 B	x	3,581	10,625	abs int	

Information technology							
BlackBerry Limited	BB	78 C	74 D	16,173	81,821	abs	
Celestica Inc.	CLS	94 B	76 C	7,523	185,586	int	① ②
CGI Group Inc.	GIB/A	84 C					

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Scores, emissions, and company detail by sector

Company	Ticker	2014 score	2013 score	Scope 1 emissions	Scope 2 emissions	Target(s) reported	Verification/assurance
<b>Materials</b>							
Agnico-Eagle Mines Limited	AEM	49	61 D	297,138	60,249	int	
Agrium Inc.	AGU	81 C	74 C	3,640,000	830,000	①	
Alamos Gold Inc.	AGI	10	10	—	—		
Barrick Gold Corporation	ABX	90 B	87 B	3,736,781	2,16,052	abs	① ②
CCL Industries	CCL/A	AQL	47	Answered questionnaire late			
Domtar Corporation	UFS	65 E	50 E	Response not public			
Eldorado Gold Corporation	ELD	70 E	58 E	113,000	319,686		
First Quantum Minerals Limited	FM	89 C	80 D	995,862	236,608	int	
Franco-Nevada Corporation	FNV	30	19	—	—		
Goldcorp Inc.	G	81 D	75 C	694,761	726,216	int	
HudBay Minerals Inc.	HBM	84 C	54 D	133,263	2,187	int	
Kinross Gold Corporation	K	85 C	89 B	793,182	544,172	① ② ③	
Lundin Mining Corporation	LUN	75 D	NR	23,212	147,592		
Methanex Corporation	MX	AQL	AQL	Answered questionnaire late			
New Gold Inc.	NGD	78 D	56 E	153,719	105,387		
Potash Corporation of Saskatchewan Inc.	POT	80 C	71 C	8,550,000	1,800,000	int	
Resolute Forest Products Inc.	DLST	90 C	76 C	1,689,284	2,511,511	abs	
Silver Wheaton Corp.	SLW	71 D	14	0	10		
Stella-Jones Inc	SJ	53 E	x	Response not public			
▼ Teck Resources Limited	TCK/B	95 A	90 B	2,722,174	366,973	abs	① ②
Turquoise Hill Resources Ltd	TRQ	SA	SA	See parent company— Rio Tinto			
West Fraser Timber Co. Ltd.	WFT	59 E	48	Response not public			
Yamana Gold Inc.	YRI	81 D	78 C	383,169	224,769		
<b>Telecommunications services</b>							
BCE Inc.	BCE	96 A-	91 B	106,426	162,294	abs	① ② ③
Bell Aliant Inc.	ACQU	64 C	71 B	35,983	76,364	abs	
Manitoba Telecom Services	MBT	83 D	72 D	10,725	2,574		
Rogers Communications Inc.	RCI/B	70 C	68 C	34,675	126,007	abs	① ②
▼ Telus Corporation	T	92 B	76 C	70,800	247,300	abs	① ② ③
<b>Utilities</b>							
Algonquin Power & Utilities Corporation	AQN	60 D	x	310,456	32,984		
Brookfield Infrastructure Partner L.P.	BIP	SA	SA	See parent company— Brookfield Asset Management Inc.			
Brookfield Renewable Power Inc.	BEP-U	SA	SA	See parent company— Brookfield Asset Management Inc.			
Capital Power Corporation	CPX	76 C	DP	9,743,878	2,679	int	①
Emera Inc.	EMA	68 C	80 B	9,757,680	163,199	abs	①
TransAlta Corporation	TA	85 C	78 C	30,476,785	175,724	abs	① ②

### Legend

▼ CDLI leader  
▼ CPLI leader

AQL answered questionnaire late

DP declined to participate

IN provided information, but did not answer questionnaire

NR no response

— information not available

x company was not on Canada 200

### Targets

abs absolute

int intensity

### Verification/assurance

① Scope 1  
② Scope 2  
③ Scope 2

Verification/Assurance approved; companies reported that they have verification complete or under way, with last year's statement available, and they were awarded full points available for their statement.

## Appendix II

Non-responding companies

Declined to participate	No response	Health care
<b>Consumer discretionary</b>		
BRP Inc	DOO	Corus Entertainment Inc.
Cineplex Inc.	CGX	IMX
Dollarama Inc	DOL	Sirius XM Canada Holdings Inc.
Linamar Corporation	LNR	XSR
Shaw Communications Inc.	SJR/B	Alimentation Couche-Tard Inc.
<b>Consumer staples</b>		
Canadian Energy Services & Technology Corp	CEU	Athabasca Oil Corporation
Freehold Royalties Ltd.	FRU	BNE
Gran Tierra Energy Inc.	GTE	CFW
Paramount Resources Ltd.	POU	Coastal Energy Company
Pason Systems Inc	PSI	Ensign Energy Services Inc.
Pembina Pipeline Corporation	PPL	ESI
Penn West Exploration	PWT	GIB
Secure Energy Services Inc	SES	IPL
Talisman Energy Inc.	TLM	MEG
<b>Energy</b>		
Allied Properties REIT	AP-U	Mullen Group Ltd
E-L Financial Corporation Limited	ELF	Peyto Exploration & Development Corp.
FirstService Corp.	FSV	PD
<b>Health care</b>		
Catamaran Corporation	CCT	Precision Drilling Corporation
<b>Industrials</b>		
Westshore Terminals Investment Corporation	WTE	Tourmaline Oil Corp
<b>Financials</b>		
Artis REIT	ART	Trilogy Energy Corp
B2GOLD CORP	BTO	Veresen Inc.
Canfor Corporation	CFP	Whitecap Resources
Labrador Iron Ore Royalty Corporation	LIF	WCP
Osisko Mining Corporation	ACQU	Artis REIT
Pan American Silver Corp.	PAA	Calloway Real Estate Investment Trust
Stillwater Mining Co	SWC/U	REF-U
Tahoe Resources Inc.	THO	Canadian Real Estate Investment Trust
<b>Materials</b>		
ATCO Ltd.	ACO/X	Labrador Iron Ore Royalty Corporation
Canadian Utilities	CU	Osisko Mining Corporation
Fortis Inc.	FTS	Pan American Silver Corp.
<b>Utilities</b>		
Cominco Real Estate Investment Trust	CUF-U	Stillwater Mining Co
Dundee Real Estate Investment Trust	D-U	Tahoe Resources Inc.
Element Financial	EFN	Choice Properties Reit
Fairfax Financial Holdings	FFH	CI Financial Corp.
Gazit Globe Ltd	GZT	Calloway Real Estate Investment Trust
Granite Real Estate Inc	TKCH	Cominco Real Estate Investment Trust
H&R Real Estate Investment Trust	HR-U	Canadian Real Estate Investment Trust
Home Capital Group Inc.	HCG	Labrador Iron Ore Royalty Corporation
Morguard Corporation	MRC	Osisko Mining Corporation
ONEX Corporation	OCX	Pan American Silver Corp.
RioCan Real Estate Investment Trust	REI-U	Stillwater Mining Co
<b>Provided information, but did not answer questionnaire</b>		
Royal Bank of Canada	RY	Artis REIT

## Appendix III

### Other responding companies

**CDP would like to recognize all Canada-based, non-Canada 200\* companies that used CDP's climate change questionnaire to manage their carbon and energy impacts this year. CDP also acknowledges those organizations whose vital information was provided to investors through another company's submission. The majority of these disclosures are publicly available at [www.cdp.net](http://www.cdp.net).**

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