

The Path to Net Zero

Survey Results From Canadian SMEs



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Key findings

- Most surveyed small and medium-sized enterprises (SMEs), regardless of province or region, are at an early stage in their emission-reduction journey.
- Only 18 per cent of our sample SMEs are measuring carbon emissions, and even fewer (15 per cent) have set net-zero targets. Of those that measure emissions, a majority are measuring direct emissions, fewer are measuring indirect emissions, and an even smaller subset is measuring upstream or downstream indirect emissions along their value chains.
- The actions that surveyed SMEs are currently undertaking mostly relate to recycling and energy efficiency.
- The top two challenges hindering the implementation of GHG reduction strategies were cost considerations and limited resources and staff.
- Most surveyed SMEs feel they don't have the internal or external support needed to measure GHG emissions. They identified financial support and lending as the most significant factor to enable them to implement a GHG-reduction strategy. Other factors mentioned were training and help to comply with government GHG regulations.



Introduction

To support Canada’s commitment to achieving net-zero emissions by 2050, Export Development Canada (EDC) and The Conference Board of Canada’s Global Commerce Centre partnered on a survey of small and medium-sized enterprises (SMEs) to understand where they are in their net-zero transition and how aware they are of the steps they need to take to get to net-zero emissions.

We initially developed a clear definition of net-zero transition maturity and built a framework to guide the design of the SME survey. The framework is explained in *The Path to Net Zero: A Primer on How to Assess SME Progress*.¹ Here we share the results of the survey.

Canada’s successful net-zero transition will be possible only if SMEs play an active role. While SMEs don’t generate high emissions individually, collectively they account for nearly 30 per cent of the national total.²

SMEs are also crucial to Canada’s international trade, and they need to be ready to trade in a global world where climate change requirements are becoming more stringent. Even SMEs that don’t directly export may be part of the supply chains of businesses that export.

Despite the importance of SMEs, most research on the green transition focuses on large emission-intensive businesses. SMEs are generally excluded from discussions on decarbonization and, consequently, the required supports. Our survey results provide evidence on how respondent SMEs across industries and provinces vary in net-zero transition maturity, as well as their perceptions of the costs and benefits of emission reductions, the challenges they face in formulating reduction strategies, and future considerations for net-zero actions.

Ultimately, SMEs will need to play their part in the national effort to reduce emissions and are vital to Canada’s success and journey toward net zero. However, the survey results underscore that reducing SME emissions will require substantive knowledge and financial support.



1 Nair, Sharma, and Topping, *The Path to Net Zero: A Primer on How to Assess SME Progress*.

2 Climate Smart, *200 Million Tonnes of Opportunity: How Small and Medium-Sized Businesses Can Drive Canada’s Clean Economy*.

The net-zero transition maturity framework

The framework conceptualizes maturity as having higher awareness of emissions and adopting practices that lead to reduced and, eventually, net-zero emissions. While we recognize that progress isn't always linear, our framework is structured as a sequence of five levels of transition maturity, presenting a clear evolution from low awareness and occasional initiatives to purpose-driven change toward achieving lower carbon emissions through the company's overall actions. (See Exhibit 1.)

Exhibit 1

The five levels of transition maturity



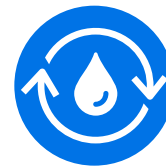
1. Getting started

No established GHG emission measurement or reduction goals. Limited awareness of the current level of emissions, with no clear reduction plan or target. Ad hoc initiatives may be in place for mandatory reporting only.



2. Compliance

Management recognizes the need to track and measure emissions for compliance. Work is under way to measure some emissions categories. Reporting on progress is compliance-driven.



3. Operational footprint strategy

Management develops a strategy to reduce Scope 1 and Scope 2 emissions, setting targets for each component of the business's operational footprint. Some aspects of Scope 3 are measured. Business decisions consider operational footprint impacts.



4. Full emission-reduction strategy

Management develops an emission-reduction strategy that includes Scope 3 emissions. Targets are set for the most material emissions categories. Business decisions consider the impacts of Scope 3 emissions.



5. Net-zero ambition

Emission-reduction strategy is aligned to a net-zero pathway. Business decisions consider the ability to meet net-zero targets.

Sources: The Conference Board of Canada; Export Development Canada.

In placing a company in one of the five levels shown in Exhibit 1, five questions are considered:

1. Does decision-making in the company factor in GHG emissions and emission reductions?
2. Does the company have a reduction goal and a target date for this reduction?
3. How expansive are the emission-reduction actions adopted?
4. Are all three scopes of emissions measured?

The GHG Protocol defines the three scopes of emissions as:

- **Scope 1:** direct emissions from owned or controlled sources, including stationary (natural gas), mobile (owned fleet), and fugitive emissions (refrigerants)
 - **Scope 2:** indirect emissions from the generation of purchased energy, including electricity, steam, heat, and cooling
 - **Scope 3:** all indirect emissions (not included in Scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions³
5. Does the company report its GHG emissions to the Government of Canada’s GHG Reporting Program (GHGRP)?

Maturity is defined as a continuum of progress across each of those five questions, with companies in the “net-zero ambition” level being:

- the most mature in their decision-making
- dedicated to their reduction goals
- expansive in their emission-reduction actions
- extensive in their emissions action’s measurement (Scope 1, 2, and 3)
- committed in their reporting of GHG emission to government programs

The higher the maturity level a business reaches, the greater its progress along our transition framework.

The path to net zero doesn’t look the same for all SME respondents. The types of actions, strategies, and decisions, as well as their sequencing and the capabilities required to achieve emission reductions, vary greatly. While most of the respondent SMEs fall into the lower three maturity categories, there are differences among the SMEs within each category, with some SMEs being more ready to move up to the next level. For this reason, we added an “entry” and “ready to mature” phase in the three lower maturity levels to indicate how close some SMEs are to moving to the next stage in their transition journey.

Entry and ready-to-mature categories differ primarily on the *type*, *scope*, and *extent* of emission-reduction actions the company undertakes. These categories can help unpack specific actions that can move SMEs further in their maturity levels. More details on the entry and ready-to-mature stages within each maturity level are provided in Table 1.

The transition framework is designed in a way that offers SMEs flexibility and customizable approaches to net-zero emissions. Recognizing that progress across each maturity level isn’t simple, the qualifying criteria across each maturity level provide helpful guideposts to inform and unpack actions and decisions that can equip SMEs to start planning their net-zero journeys, while also helping them track their changes in maturity levels over time. Ultimately, we hope the framework empowers SMEs to measure, manage, and track their actions and emissions, offering a clear pathway to net-zero progress.

³ World Resources Institute and World Business Council for Sustainable Development, “Greenhouse Gas Protocol: FAQ.”

Table 1
Maturity framework

		1. Does decision-making in the company factor in GHG emissions and emission reductions	2. Does the company have a reduction goal and a target date for this reduction?	3. How expansive are the emission-reduction actions adopted?	4. Are all three scopes of emissions measured?	5. Does the company report its GHG emissions to the GHGRP?
Level 1: Getting started	Entry	Doesn't impact decision-making very much at all	Has no reduction goal	Doesn't undertake most actions	None	No
	Ready to mature	Doesn't impact decision-making very much at all	Has no reduction goal	Doesn't undertake most actions	Scope 1 only if mandatory	Only if mandatory
Level 2: Compliance	Entry	Impacts decision-making to a degree	Has a reduction goal and target date	Has started work to measure and analyze GHG emissions, reduce waste, increase recycling, and choose green infrastructure or equipment	Some aspects of Scope 1 and 2	Yes
	Ready to mature	Impacts decision-making to a degree	Has a reduction goal and target date	Has started work to measure and analyze GHG emissions, reduce waste, increase recycling, and choose green infrastructure or equipment	Scope 1 and 2	Yes
Level 3: Operational footprint strategy	Entry	Is a core component that impacts decision-making	Has a reduction goal and target date	Does Level 2 actions plus reports on GHG emissions, reduces energy consumption, encourages employees to optimize transportation to work, raises awareness on GHG emissions among company's suppliers, and promotes environmentally friendly ways of working	Scope 1 and 2 and some aspects of Scope 3	Yes
	Ready to mature	Is a core component that impacts decision-making	Has a reduction goal and target date	Does Level 3 actions in entrance category plus some other actions from Level 4	Scope 1 and 2 and more aspects of Scope 3	Yes
Level 4: Full emission-reduction strategy		Is a core component that impacts decision-making	Has a reduction goal and target date	Does Level 3 actions plus switches to renewable energy, chooses sustainable suppliers, raises awareness on GHG levels with partners and customers, and purchases carbon offsets	Scope 1, 2, and 3	Yes
Level 5: Net-zero ambition		Is a core component that impacts decision-making	Has a reduction goal and target date	Does Level 4 actions plus has net-zero targets and lobbies politicians in the area to be active in emission reduction	Scope 1, 2, and 3	Yes

Sources: Export Development Canada; The Conference Board of Canada.



Most SMEs are at the beginning of their net-zero journey

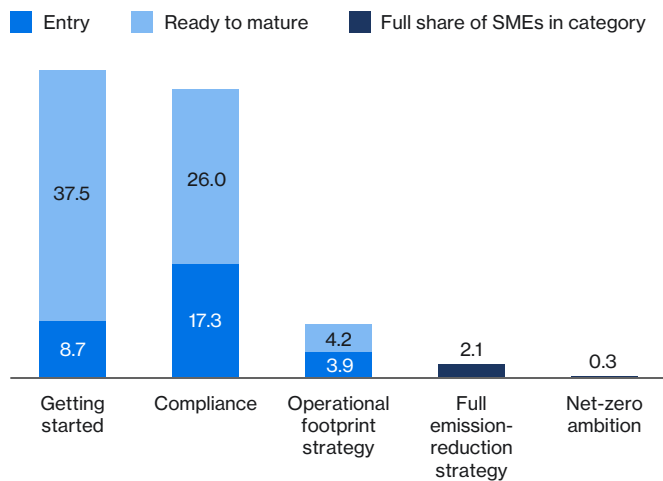
The survey was conducted by EDC in November and December 2022 to ascertain SME perceptions, actions, and challenges related to GHG-emission reductions. Over two weeks, 1,344 organizations responded to our questions.

Of these, we included 381 SMEs in this analysis. This sample size is broadly representative of Canada's SME population. (See Appendix A for a breakdown of the sample respondents and the data by province, industry, and size.) The critical factors that led to companies being excluded from the analysis were that they were not export oriented, they were too large, or they didn't discuss GHG emissions in their business. This last group was excluded because we assumed some level of knowledge or awareness was necessary for an SME to be included in our maturity framework. The total of 499 companies in this group highlights how many SMEs are inactive or disengaged from emission-reduction discussions. It also makes a strong case for support to help SMEs take appropriate carbon-correcting actions.

Using the net-zero transition maturity framework in Exhibit 1, we found that the vast majority (89.5 per cent) of the respondents fall into the two lower levels of transition maturity. (See Chart 1.)

Chart 1

Most SMEs are at a low level of transition maturity (per cent, n = 381)



Sources: Export Development Canada; The Conference Board of Canada.

The largest cohort falls into the **getting started** level of maturity (46.2 per cent), which is characterized by SMEs that have:

- no established GHG emission measurement or reduction goals
- limited awareness of the current level of emissions
- no clear reduction plan or target
- ad hoc initiatives that may be in place for mandatory reporting only

However, within the getting started level, a majority are **ready to mature**, highlighting how undertaking a few GHG-reduction actions could help them move to the next stage of maturity.

The second-largest share fall in the **compliance** level of maturity (43.3 per cent), characterized by SMEs that recognize the need to track and measure emissions and have internal compliance policies for measuring some emissions categories. As with the getting started level, most compliance-level SMEs are ready to mature to the next level if they tweak some GHG-reduction actions. Compliance-level SMEs have a goal and target date for reducing emissions, but not necessarily a net-zero target.

A smaller share (8.1 per cent) of surveyed SMEs fit within the **operational footprint strategy** level of maturity. SMEs at this level have placed carbon reductions at the heart of their business activities and have typically taken multiple net-zero actions (such as measuring Scope 1 and 2 emissions and some Scope 3 emissions).

Progress beyond maturity Level 3 is rare in our sample; only 2.1 per cent are in the **full emission-reduction strategy** level and less than 1 per cent are in Level 5 **net-zero ambition**. These levels comprise SMEs that are more ambitious in their net-zero actions.

No province has a high level of SME transition maturity

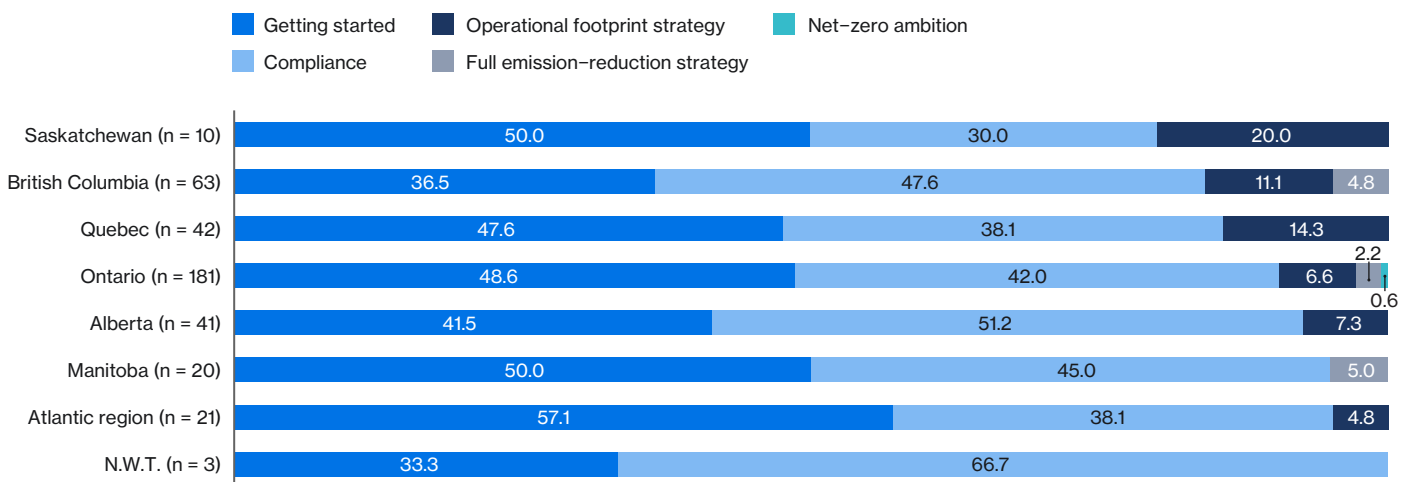
We do see some variation across provinces, but at least 80 per cent of the respondent SMEs in every province/region fall into the two lower maturity levels. (See Chart 2.) Notably, Saskatchewan (20.0 per cent), British Columbia (15.9 per cent), and Quebec (14.3 per cent) have the highest share of SMES at Level 3 or higher in our maturity framework.

At the **operational footprint strategy** level (Level 3), Saskatchewan has the highest provincial share, followed by Quebec and British Columbia. Manitoba and British Columbia have the highest share of respondent SMEs in the **full emission-reduction strategy** level (Level 4), while the one surveyed SME at the highest level, **net-zero ambition**, is in Ontario.

All Canadian provinces have set emission reduction or net-zero targets, and all Canadian jurisdictions are subject to carbon-pricing mechanisms. Further research could shed light into whether SMEs might be subject to differential regulations and how that could affect their maturity levels.

Chart 2

Transition maturity varies among provinces (percentage of SMEs)



Sources: Export Development Canada; The Conference Board of Canada.

Firm size makes a slight difference

The maturity levels of the surveyed SMEs are correlated with firm size, as measured by the number of employees and the level of annual sales.

Respondent SMEs with lower annual sales are on lower transition maturity levels. Almost 98 per cent of our surveyed SMEs with sales less than \$300 million are in the two lower maturity levels (**getting started** or **compliance**) compared with those with sales of \$300 million or more.

Looking at SME size in terms of number of employees shows a similar share of our sample SMEs characterized as a small business (fewer than 100 employees) and those characterized as a medium-sized business (100–499 employees) are in the two lower maturity levels.

A slightly larger share of medium-sized businesses are in the top two maturity levels. While intuitive, it suggests that medium-sized businesses may have access to more resources, which could help them appropriately measure and analyze GHG emissions. They may also be mandated to adhere to more stringent assessments of their carbon emissions. Small businesses, meanwhile, may be having more difficulties measuring and reducing emissions, given where they are in their maturity levels. This suggests they may require appropriate guidance and support in their net-zero journey.

Exposure to international trade has a minimal effect on maturity levels

To capture the nuances of SMEs engaged in international trade, our survey focused on “trade-exposed” SMEs. Trade-exposed SMEs are businesses that are:

- currently exporting or importing;
- planning to export or import in the future; or
- connected indirectly to global supply chains.

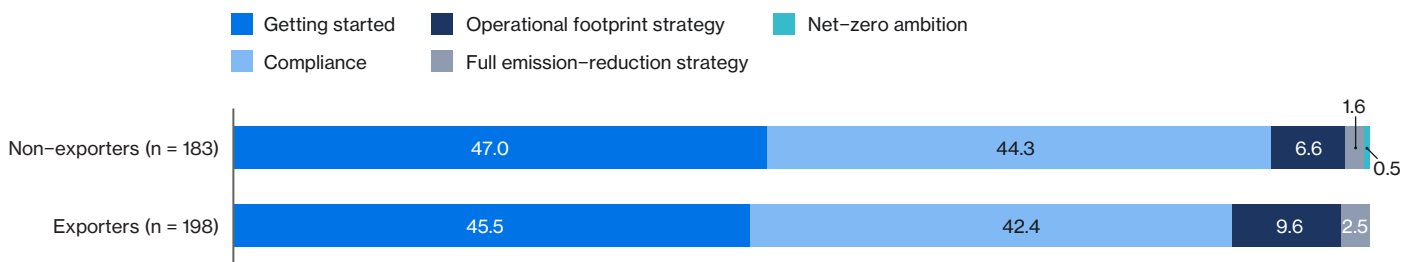
Our sample has an almost 50–50 split between exporters and non-exporters (while only about 12 to 15 per cent of overall Canadian SMEs are exporters). Of the trade-exposed SMEs that are currently exporting, slightly more fall under more mature categories in our transition maturity framework than those not currently exporting. (See Chart 3.)

Construction sector has the lowest level of maturity

Transition maturity levels vary across different sectors of the economy, but they are still generally low. Manufacturing (16.9 per cent) and mining (13.8 per cent) have the highest share of respondents above the first two levels of maturity. (See Chart 4.) Manufacturing, mining, business services, and utilities are the only sectors with respondent SMEs in the two highest maturity levels.

Chart 3

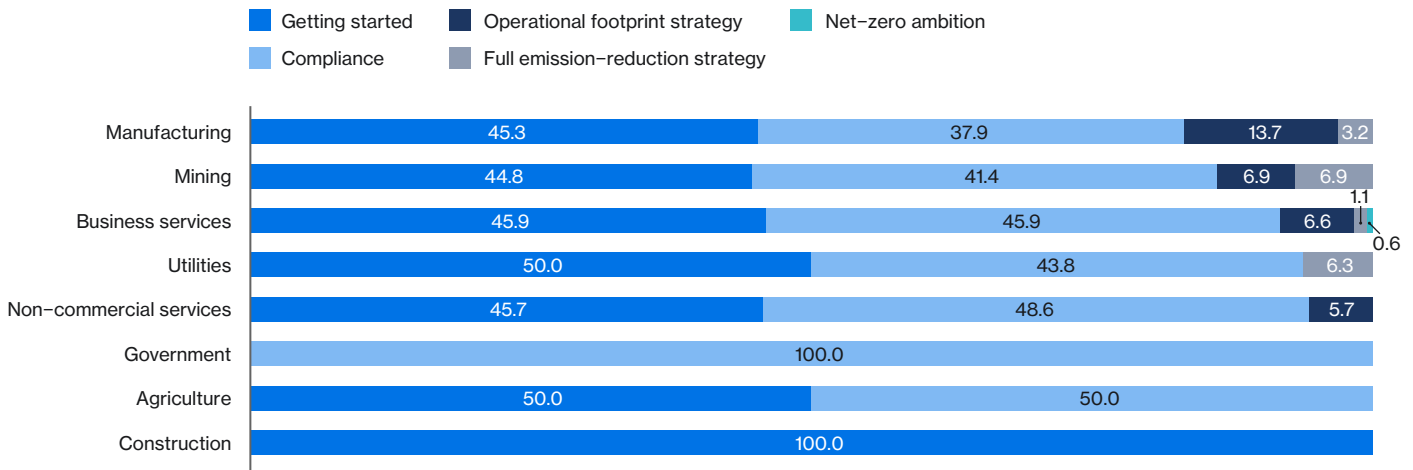
Exporting SMEs are slightly more mature in their transition level (per cent)



Sources: Export Development Canada; The Conference Board of Canada.

Chart 4

Manufacturing and mining sectors have highest transition maturity (percentage of SMEs in sector)



Sources: Export Development Canada; The Conference Board of Canada.

Within the business services sector, the one SME at the highest maturity level is in the retail industry.

The construction, agriculture, and government sectors have no respondent SMEs beyond the first two maturity levels.

SMEs in high-emission-intensity industries more likely to measure GHG emissions and set targets

Businesses belonging to high-emitting sectors might be more likely to take certain carbon-correcting actions because it's expected of them. They may be mandated by law to measure, report, and reduce emissions. They're also more likely to be subject to carbon prices or taxes.

To test this hypothesis, we broke our sample down into two groups: high-emitting sectors and low-emitting sectors. We used publicly available data on Canadian GHG emissions and business population statistics to attribute high- and low-emission status across the sample. Using industry-wide GHG emissions data and gross domestic product (GDP) by industry data, we calculated aggregate emission intensity for each sector.

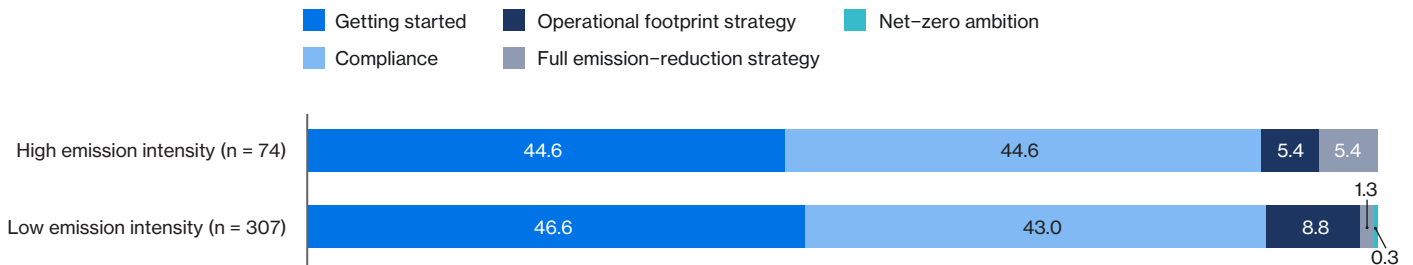
We then compared our calculated aggregate emissions intensities against the detailed aggregate industry data available by Statistics Canada to do a “sense check”—we couldn't directly use the detailed emissions intensity data because there were several values for each category, and we didn't know the appropriate weights to apply across the data. Our sense check showed our sample of SMEs includes 81 per cent low emitters and 19 per cent high emitters.

Both groups had 90 per cent of respondent SMEs in the two lower maturity levels. (See Chart 5.) However, a slightly greater share with high-emission intensity (5.4 per cent) than with low-emission intensity (1.6 per cent) are in the two highest levels of maturity.

We also found that a larger proportion of high emitters in our sample are taking action to reduce GHG emissions, such as measuring GHG emissions and setting net-zero targets. (See Chart 6.) However, an equal number of high and low emitters (about 65 per cent) report their GHG emissions to the GHGRP, with no statistically significant difference between them.

Chart 5

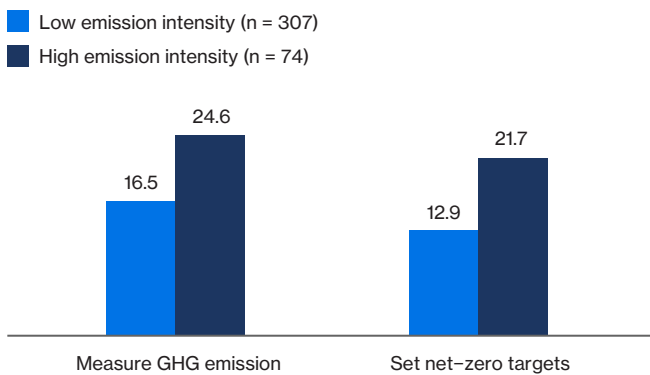
Emission intensity affects maturity level slightly
(percentage of SMEs)



Sources: Export Development Canada; The Conference Board of Canada.

Chart 6

High emitters more likely to take action to reduce GHG emissions
(percentage of SMEs)



Sources: Export Development Canada; The Conference Board of Canada.

Perceptions and actions vary due to many factors

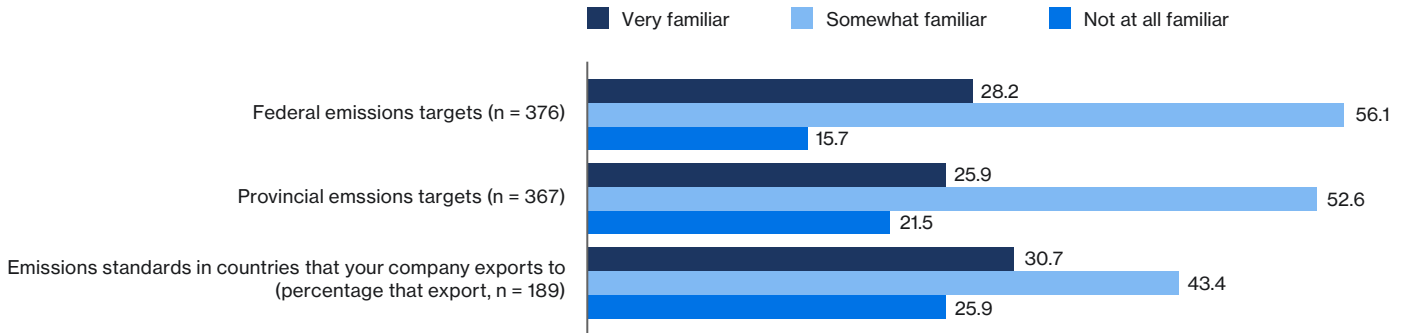
Most SMEs are aware of emission standards

The extent to which businesses are well informed about climate change and relevant policies may be closely linked to how committed they are to doing something about it. Most SMEs in our sample are familiar with Canada’s federal and provincial emission targets, and most exporting SMEs surveyed are familiar with emissions standards in countries they export to. (See Chart 7.)



Chart 7

Most SMEs are familiar with domestic and international emissions targets and standards (per cent)

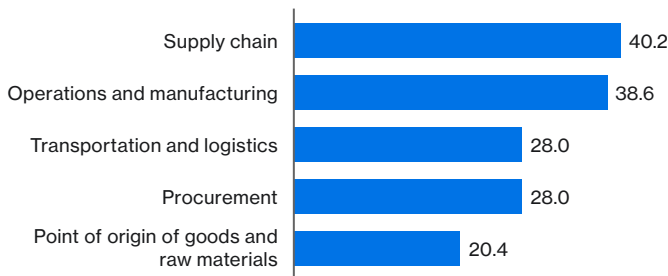


Sources: Export Development Canada; The Conference Board of Canada.

In the same vein, a strong share of SMEs in our sample are having GHG conversations about supply chain emissions (40.2 per cent) and operations and manufacturing emissions (38.6 per cent). (See Chart 8.)

Chart 8

Conversations about supply chain emissions are most common (percentage of surveyed SMEs having emissions conversations)



Sources: Export Development Canada; The Conference Board of Canada.

Surveyed SMEs also report feeling pressure to reduce GHG emissions from their employees (33 per cent), their domestic customers (23 per cent), and their international customers (16 per cent).

Few SMEs measure emissions

The activity of measuring GHG emissions and setting targets provides a strong indicator of business intent and progress along our transition maturity framework. Only 18 per cent of our sample SMEs measure GHG emissions, and only 15 per cent of have set net-zero targets. Some SMEs in levels below Level 5 have set net-zero targets, but they haven't taken the other actions to push them to a higher level.

Of those SMEs that measure emissions, we find significant variation within and between the rates of Scope 1, 2, and 3 emissions measured. (See Table 2.) For example, we found:

- Measurement of Scope 1 emissions varies between 20.3 per cent (emissions related to refrigeration) and 64.4 per cent (emissions related to owned vehicles).
- Measurement of Scope 2 emissions varies between 45.8 per cent (emissions related to heat) and 57.6 per cent (emissions related to electricity).
- Measurement of Scope 3 emissions varies between 15.3 per cent (emissions related to rental equipment) and 50.8 per cent (emissions related to garbage generated in operations).

Table 2

Scope 1 and 2 emissions are measured the most (percentage of SMEs measuring emissions)

Scope 1		Scope 2		Scope 3	
Owned vehicles	64.4	Electricity	57.6	Garbage – generated in operations	50.8
Owned equipment	54.2	Heat	45.8	Paper consumption	33.9
Production	37.3			Garbage – end-of-life treatment of sold products	30.5
Refrigeration	20.3			Business travel by air	23.7
				Staff commuting	22.0
				Third-party shipping	22.0
				Rental equipment	15.3

Sources: Export Development Canada; The Conference Board of Canada.

Though businesses can still make progress on reducing carbon emissions without formally measuring them, intention to measure also signals future advances in maturity. In fact, 27.7 per cent of our sample SMEs plan to measure GHG emissions in the future, and 18.5 per cent are discussing how to measure emissions.

Another important consideration in our maturity framework is the actions SMEs take to reduce their carbon footprints. These actions greatly differ in complexity, cost, and effort needed to implement, all of which adds another layer of difficulty for businesses to execute GHG-reduction strategies and set net-zero targets.



When presented with a list of actions aimed at reducing emissions, the ones most commonly undertaken by the surveyed SMEs include increased recycling, reducing waste, and reducing energy consumption. (See Table 3.) Less than 20 per cent of the surveyed SMEs have taken more ambitious actions such as measuring, analyzing, and reporting on GHG emissions; setting net-zero targets; lobbying politicians to be active in GHG reduction; or purchasing carbon offsets.

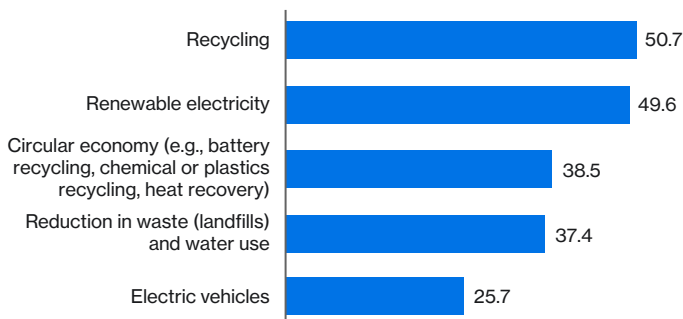
We also asked our survey respondents if they were considering any actions or adopting specific technologies to reduce carbon emissions in the future. Though most already report taking actions to recycle, reduce waste, and improve energy efficiency, these three broad topics also came up as planned future actions. In general, we found that proportionally more SMEs in our sample are planning easier-to-implement actions to reduce their GHG emissions in the future than are planning more resource-intensive and expensive actions such as adopting digital technologies to reduce emissions, adopting battery-powered electricity, or using sustainable biofuels. (See Chart 9.)

Table 3
GHG reduction activities undertaken tend to be less ambitious
 (percentage of surveyed SMEs undertaking GHG reduction activities)

Increasing recycling	60.5
Reducing waste	53.1
Reducing energy consumption	48.0
Choosing greener infrastructure or equipment (e.g., efficient printers, bulbs, screens, office materials)	45.8
Promoting environmentally friendly ways of working (e.g., hybrid model, 100 per cent telecommuting model, video calls instead of in-person events)	41.5
Encouraging employees to optimize transportation to work (e.g., take public transit, carpool)	39.0
Choosing sustainable suppliers	30.8
Raising awareness about GHG emissions with our employees	29.7
Raising awareness about GHG emissions with our customers	24.2
Switching to renewable energy	21.2
Raising awareness about GHG emissions with our partners	19.7
Measuring GHG emissions	18.2
Reporting on GHG emissions	16.7
Analyzing GHG emissions	16.2
Setting net-zero targets	14.7
Lobbying politicians in your area to be active in GHG reduction	12.7
Purchasing carbon offsets	12.0

Sources: Export Development Canada; The Conference Board of Canada.

Chart 9
Future mitigation actions to reduce GHG emissions tend to be those that are easier to implement
 (percentage of SMEs planning action, n = 369; multiple responses possible)



Sources: Export Development Canada; The Conference Board of Canada.

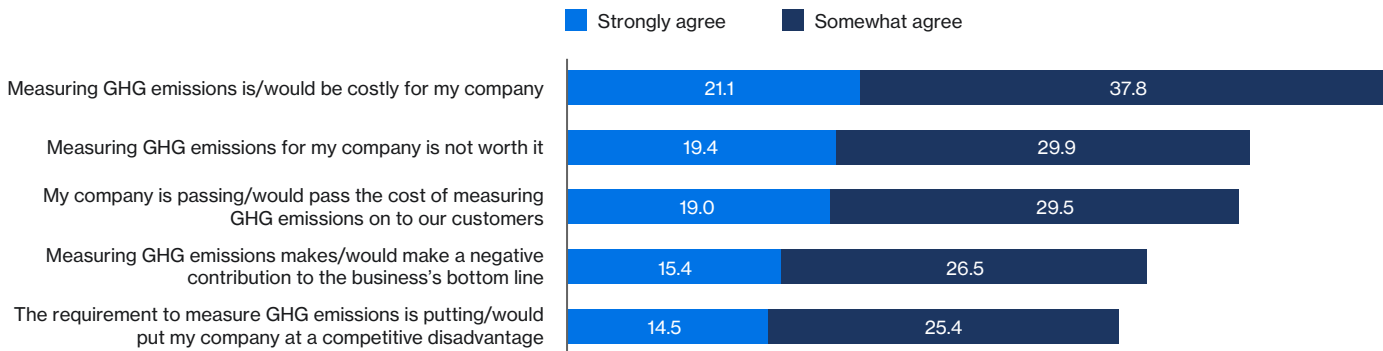
SMEs perceive both costs and benefits from a transition to net zero

To understand the drivers and motivations of climate change action, we asked the SMEs about their perceptions. In response to statements about the costs and benefits of various measures associated with reducing their emissions, respondents were asked to choose from five options: strongly agree, agree somewhat, neither agree nor disagree, disagree somewhat, or strongly disagree.

The most-cited drawback to measuring GHG emissions was that it would be costly for their business. (See Chart 10.) A total of 58.9 per cent of SME respondents said it would be costly, with 21.1 per cent strongly agreeing with the statement and 37.8 per cent somewhat agreeing. About 40 per cent of respondents said measuring GHG emissions would be bad for their business’s bottom line and would put them at a competitive disadvantage. Nearly half of the surveyed SMEs said they would pass on the cost of measuring emissions to their customers.

Chart 10

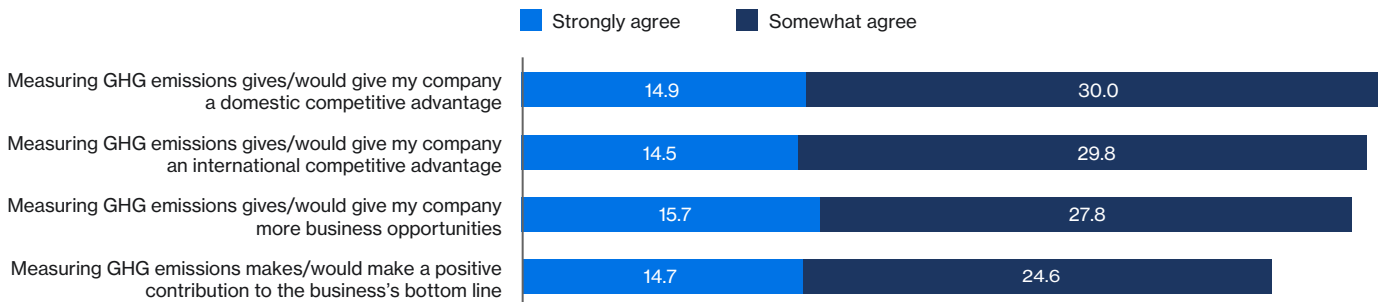
SMEs feel measuring emissions would be costly
(per cent, n = 381)



Sources: Export Development Canada; The Conference Board of Canada.

Chart 11

SMEs see some benefits to measuring GHG emissions
(per cent, n = 381)



Sources: Export Development Canada; The Conference Board of Canada.

While the share of respondents citing negative effects of measuring GHG emission was slightly larger, a still substantive share noted potential benefits: 44.9 per cent of surveyed SMEs agreed that measuring emissions would give their company a domestic competitive advantage, and 44.3 per cent said it would give them an international competitive advantage. (See Chart 11.) Similar shares believed measuring emissions would give them more business opportunities and make a positive contribution to their bottom line.

As part of Canada’s transition to a low-carbon economy, in 2020, the federal government announced its intention to explore the potential of border carbon adjustments.⁴ (See “What is a border carbon adjustment?”) In 2022, the European Union

announced its Carbon Border Adjustment Mechanism, the world’s first such tariff on imports; its first phase entered into force October 1, 2023. We asked our survey SMEs about their perception of the impact of a border carbon adjustment on their companies. Almost half of the respondents said it would motivate their company to reduce GHG emissions, and 45 per cent noted that it would positively impact their international sales. (See Chart 12.) These businesses see an opportunity for their companies and new growth paths for their international sales.

4 Government of Canada, “Exploring Border Carbon Adjustments for Canada.”

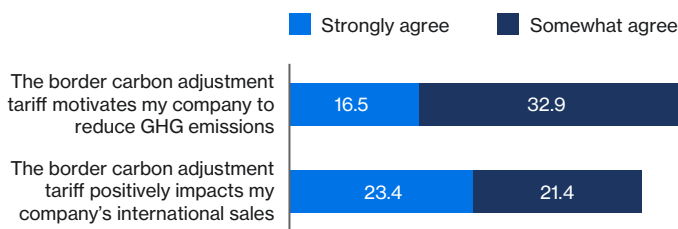


What is a border carbon adjustment?

Border carbon adjustments are fees levied on imported goods to account for the carbon emissions released in the production of these goods in their countries of origin. Import-focused carbon fees may be implemented unilaterally or paired with domestic carbon-pricing policies. Typically, if an imported good is subject to a carbon price in its home country, then that price is deducted from any import-related carbon fees. The purpose of border carbon adjustments is to ensure fairness in carbon pricing for domestic and imported goods and to mitigate carbon leakage that may occur due to relocation of production out of country to avoid domestic carbon prices.

Chart 12

Many SMEs see advantages to border carbon adjustments (per cent, n = 381)



Sources: Export Development Canada; The Conference Board of Canada.

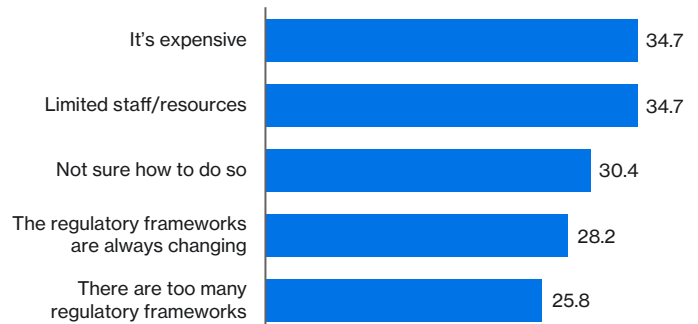
SMEs face many challenges in their net-zero transition

We asked our survey SMEs about the challenges they face in implementing GHG-reduction strategies. These challenges are multiple, complex, and often specific to the business in question. But overall, respondents identified costs, gaps in resources and knowledge, and unclear regulations as top barriers to adopting GHG-reduction actions.

The top two challenges cited were cost considerations and limited resources and staff (both 34.7 per cent). (See Chart 13.) These were closely followed by a lack of knowledge on how to undertake a GHG-reduction strategy and confusion about regulatory frameworks.

Chart 13

Cost and limited staff hinder the implementation of a GHG-reduction strategy (per cent, n = 372; multiple responses possible)



Sources: Export Development Canada; The Conference Board of Canada.

The importance of cost bottlenecks is consistent with other literature on reducing GHG emissions. At the same time, our results provide a more nuanced picture, where costs and limited resources are key issues, but many survey respondents are also held back by a lack of knowledge about undertaking emission reductions and navigating existing regulatory frameworks. This recurrent theme stresses the need for tailored knowledge and solutions that equip SMEs to take GHG-reduction actions.

Breaking down the challenges cited by survey SMEs by their maturity levels offers a more detailed view. For SMEs in the three lowest levels of maturity, the top five challenges remain largely consistent with those shown in Chart 11. However, for those at Level 4 (**full emission-reduction strategy**), challenges around regulation are replaced by “no significant benefit to the business,” “it’s too complicated,” “worried our customers will purchase from another company,” and “lack of capability/knowledge in-house.” (See Chart 14.) The one surveyed SME at the top maturity level cited one challenge: “Not enough buy-in from senior leadership.”



Chart 14

SMEs at maturity Level 4 see cost issues in implementing a GHG strategy (per cent, n = 8; multiple responses possible)



Sources: Export Development Canada; The Conference Board of Canada.

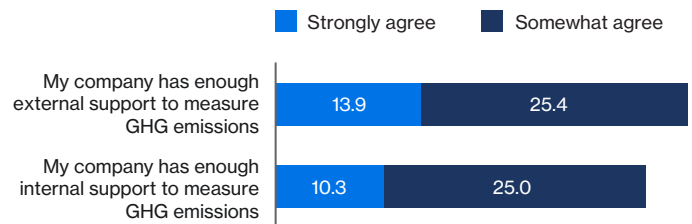
While the challenges of responding to climate change are significant, so too are the potential opportunities of aligning with net-zero goals. Businesses successfully adapting to a trade landscape that’s becoming ever more focused on climate change are more likely to build competitive advantages ranging from better access to capital to improved efficiency.

Financial support and training are critical to overcoming barriers to SME net-zero transition

Less than 40 per cent of surveyed SMEs feel they have the internal or external support needed to measure GHG emissions. (See Chart 15.)

Chart 15

Many SMEs want support to measure GHG emissions (per cent, n = 381)



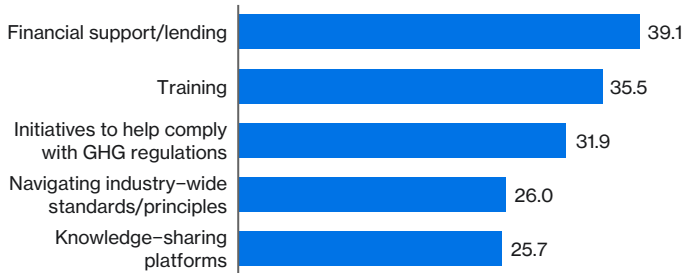
Sources: Export Development Canada; The Conference Board of Canada.

Given how prevalent challenges related to costs and limited resources are across businesses, it’s not surprising that our sample SMEs consider financial support and lending to be the most significant support needed to implement a GHG-reduction strategy. (See Chart 16.) In second spot is training on GHG-related issues, followed by support and initiatives to help comply with government-related GHG regulations.

Chart 16

Financial support and training are needed to implement a GHG-reduction strategy

(per cent, n = 335; multiple responses possible, top five answers)



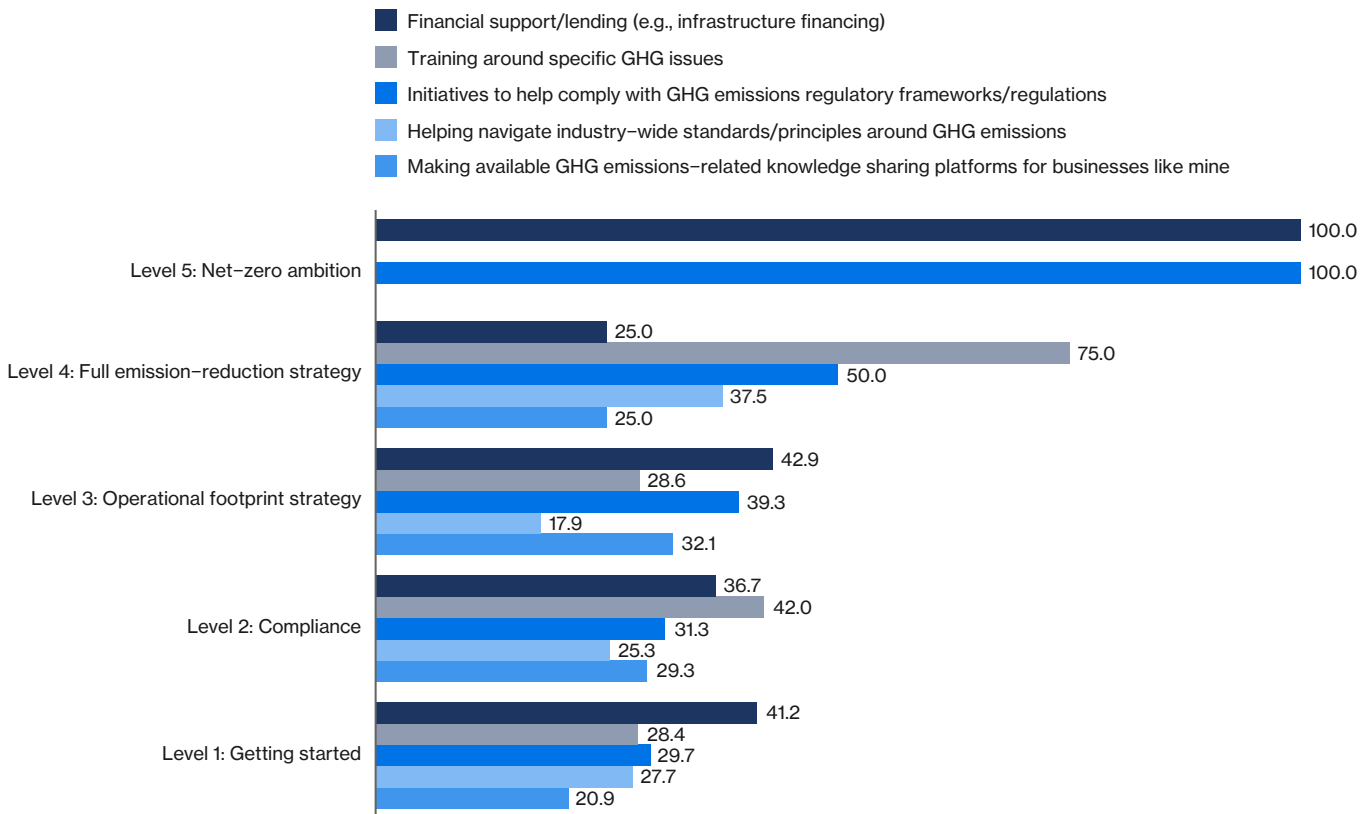
Sources: Export Development Canada; The Conference Board of Canada.

The support needed to implement an emission-reduction strategy shown in Chart 14 is fairly similar across the maturity levels, although some interesting differences at the top two levels are revealed. (See Chart 17.) The SMEs at Level 4 maturity (**full emission-reduction strategy**) that provided feedback are most concerned about training support and initiatives to help comply with GHG-emissions regulations. The one surveyed SME at Level 5 who responded (**net-zero ambition**) also cited a need for initiatives, as well as wanting financial support.

Chart 17

Type of support needed is similar across maturity levels

(per cent, n = 335; multiple responses possible)



Sources: Export Development Canada; The Conference Board of Canada.



Next steps

The survey results provide a snapshot of the current status of the surveyed Canadian SMEs in their transition journey to net zero. By also examining the actions SMEs are taking, the challenges they face, and the type of support they need, our goal is to highlight a gap that needs to be filled for net zero to become a reality.

Most surveyed SMEs have begun their transition journey but remain at an early stage. Challenges preventing action are multiple and complex, though many of the most cited barriers revolve around high costs and limited resources. Even though SMEs in our sample want to reduce their emissions, uncertainties about costs and regulations weigh on their actions. The reality remains that most surveyed SMEs simply don't have the resources on their own to pursue significant and lasting emission-reduction measures. They lack the staff, know-how, and money to invest in the infrastructure needed.

Any support activities must consider the distinctive opportunities and barriers facing SMEs. Tailored information that boosts knowledge and capabilities and clarifies regulatory frameworks will be crucial. Networks will play a key role to help businesses achieve net zero. Leveraging skills and competencies of external professional consultants that can help small businesses will also be useful while SMEs build in-house measurement capabilities.

Interventions to support SMEs in their transition journey can build on the willingness of SMEs to take action. The SMEs we surveyed were generally open to the need to reduce emissions. While only 18 per cent now measure their GHG emissions, another 46 per cent are planning or discussing how to do so. Another welcome finding is that, despite their current low transition-maturity level and the challenges they face, a substantive proportion of the SMEs in our survey were aware of and agreed that reducing emissions could provide potential competitive advantages and opportunities.

In general, SMEs need to be equipped with tools and resources to measure their emissions, set emission-reduction goals, take appropriate actions, report their progress, and ultimately get on the path to reduced and zero emissions. While our framework provides a starting point and guideline for SMEs and other stakeholders, the path to net zero can't be undertaken alone and will require collective action.

Appendix A

Survey participants and sample characteristics

Survey participants

The survey was completed by 1,344 respondents. A total of 963 respondents were excluded for one of the following reasons:

- Were not trade exposed—252 companies
- Didn't know enough about the strategy of the company they worked for—32 participants
- Didn't discuss GHG reduction at all in their business—499 companies
- Weren't familiar with their company's approach to GHG reduction—49 participants
- Large companies (companies with 500 employees or more)—80 companies
- Companies that didn't identify their size—51 companies

These exclusions resulted in 381 trade-exposed export-oriented SMEs with some level of GHG awareness being included in the analysis.

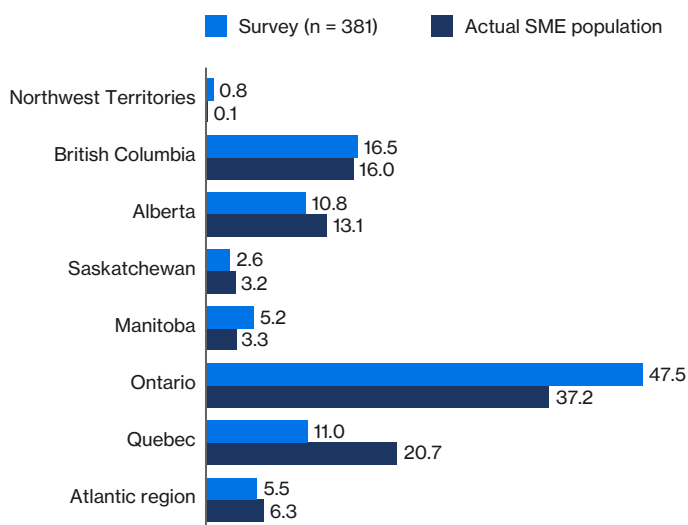
Sample characteristics

Province/region

The sample is broadly representative of the general SME population in Canada for most provinces. However, Ontario is overrepresented, and Quebec is underrepresented.

Chart 1

Share of Canadian SMEs by province/region (per cent)



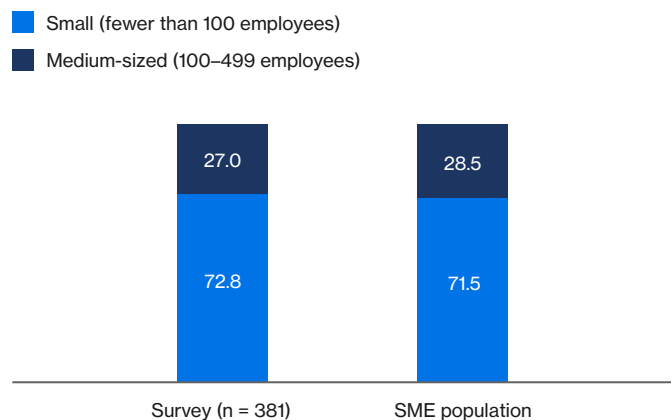
Sources: Export Development Canada; The Conference Board of Canada; Statistics Canada, Table 33-10-0304-01.

Number of employees

Seventy-three per cent of our sample SMEs are classified as small businesses (0 to 99 employees), and 27 per cent are classified as medium-sized businesses (100 to 499 employees), which is representative of Canada's split between small and medium-sized enterprises.

Chart 2

Business size measured by number of employees (per cent)



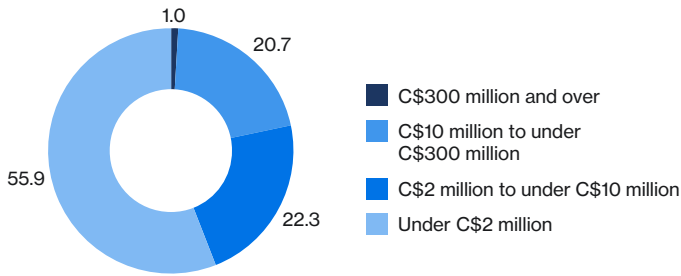
Sources: Export Development Canada; The Conference Board of Canada; Statistics Canada, Table: 14-10-0215-01.

Annual sales

A majority of respondents in our sample (55.9 per cent) have annual sales of less than C\$2 million, and 78.2 per cent have sales under C\$10 million.

Chart 3

Share of survey SMEs by annual sales
(per cent, n = 381)



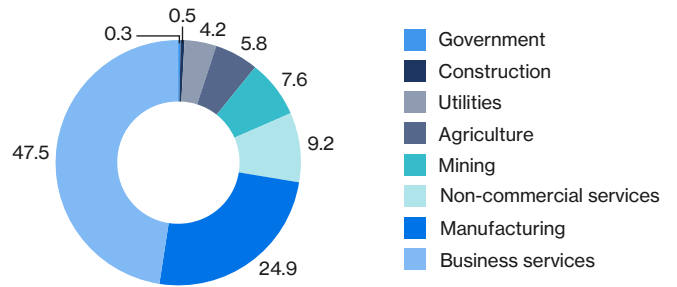
Sources: Export Development Canada; The Conference Board of Canada.

Economic sectors

Almost half of the survey SMEs (47.5 per cent) are in the business sector. The next largest category is manufacturing (24.9 per cent).

Chart 4

Share of survey SMEs by sector
(per cent, n = 381)



Sources: Export Development Canada; The Conference Board of Canada.

Appendix B

Survey methodology

To build our understanding and further the evidence base on SME transition readiness, we conducted a survey targeting SMEs involved in trade (exporting or importing) and/or connected to global supply chains. In line with our research objectives, the survey tool was developed by EDC and The Conference Board of Canada with feedback from external stakeholders. The survey was designed to explore business characteristics, net-zero actions planned or currently taken, and challenges and enablers to actions. The survey was conducted in November and December 2022 and led by EDC's market research team. Exporters are overrepresented in our sample given the scope and nature of our research. Details of the survey are as follows:

1. **Purpose:** to understand SMEs' progress toward emissions reductions and where they need the most help to build a net-zero strategy
2. **Respondents:** employees from trade-engaged companies who at least consider GHG reduction and are knowledgeable about their company's reduction activities
3. **Report Sample size:** 381 small and medium-sized enterprises
4. **Methodology:** online survey
5. **Language:** respondent's choice of English or French
6. **Data collection:** November 18, 2022, to December 7, 2022
7. **Sampling approach:** third-party sample provider Maru/Blue
8. **"Don't know" responses** are excluded from the calculations, unless indicated otherwise.
9. **For more information on the survey**, please contact Jennifer Topping (JTopping@edc.ca or 613-598-2992).

Appendix C

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Acknowledgements

This research was funded by The Conference Board of Canada's Global Commerce Centre and Export Development Canada.

The following members of The Conference Board of Canada's team contributed to this work: Michael Burt, Sohaib Shahid, and Brenda Lafleur.

The following members of Export Development Canada's team contributed to this work: Janet Wilson, Karen Turner, and William Thomas.

We also wish to thank the members of the Research Advisory Board who supported this research.

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To cite this research: Sharma, Prerna, Jennifer Topping, and Swapna Nair. *The Path to Net Zero: Survey Results From Canadian SMEs*. Ottawa: The Conference Board of Canada, 2023.

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