



CANADIAN
MANUFACTURERS
& EXPORTERS

Toward a Net Zero Industrial Strategy

Presentation to the Air & Waste
Management Association

September 13, 2022



FOR MANUFACTURERS, BY MANUFACTURERS



WHO ARE WE?

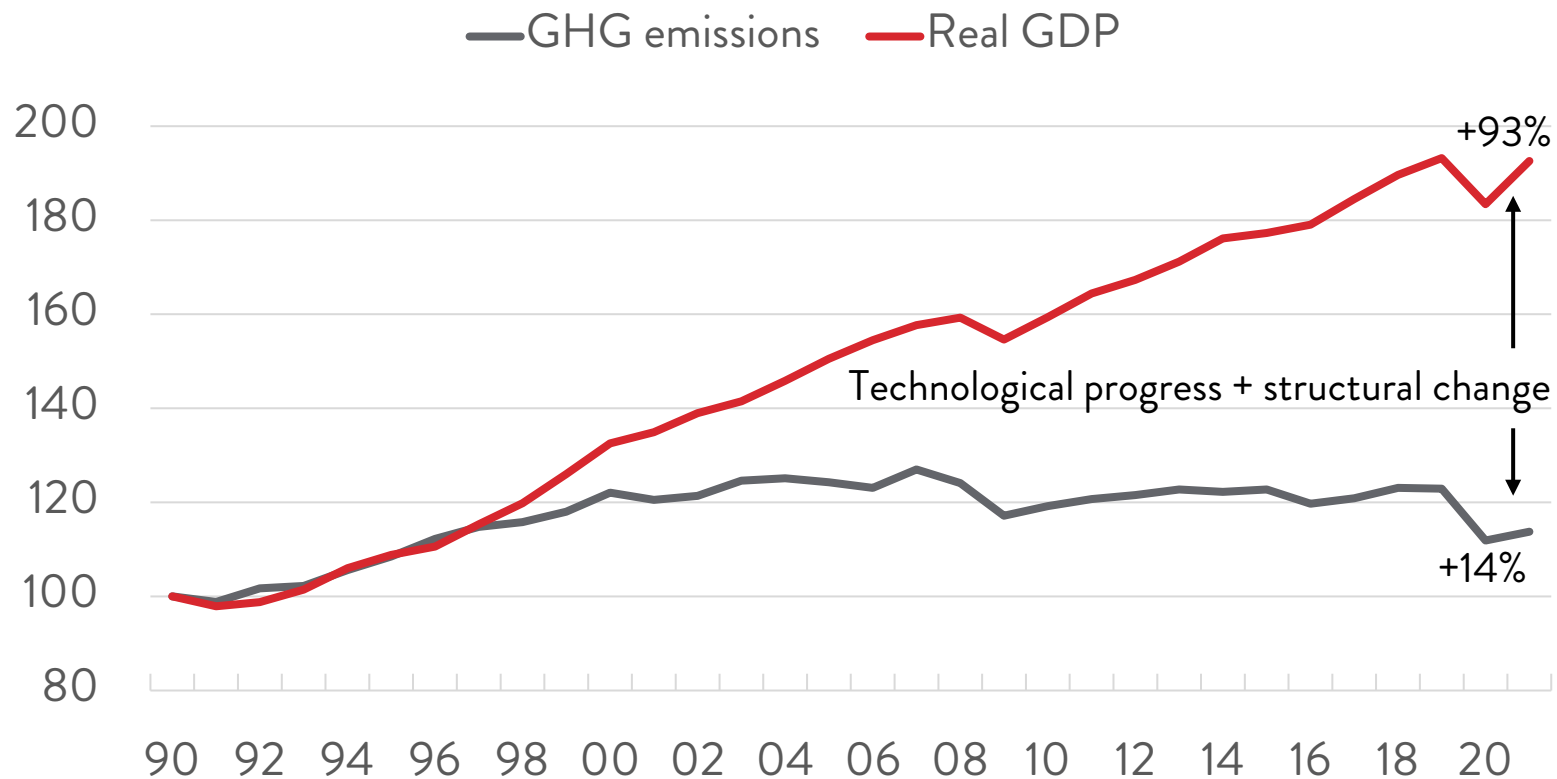
- Not-for-profit business association
- Owned and led by members
- Established in 1871 - operating for over 150 years
- Offices across Canada
- Operate provincially and nationally
- Engage members through a range of committees and direct connections

CME HELPS IN THE FOLLOWING WAYS

- **Saving you Money** – funding incentives and member benefits to lower costs and improve productivity
- **Employees** – training & education to help them do their jobs better
- **Government** – advocate for improved business conditions, regulatory policies, investment supports
- **Customers** – intelligence on market/business conditions

THE TRAJECTORY OF REAL GDP AND GHG EMISSIONS

Canada (1990=100)

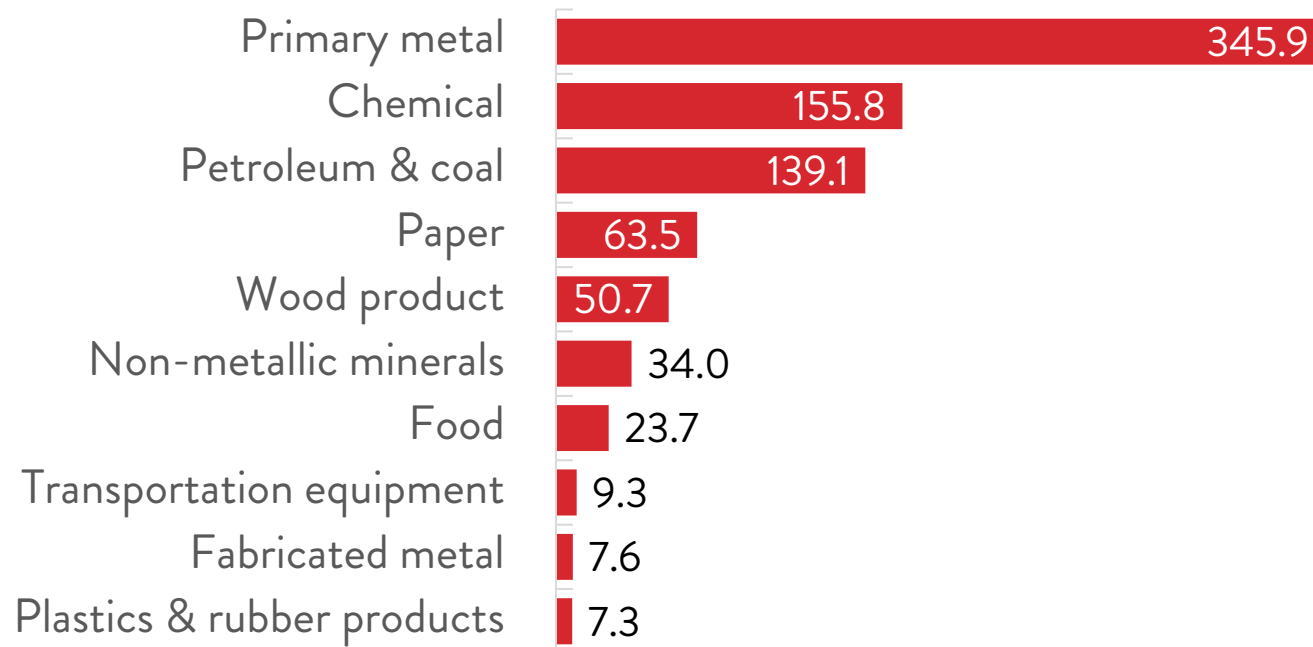


While Canada's economy has grown by a total of 93% since 1990, GHG emissions are up just 14%.

This difference in growth is attributable to both technological progress and structural change.

CAPITAL EXPENDITURES ON POLLUTION PREVENTION, ABATEMENT AND CONTROL

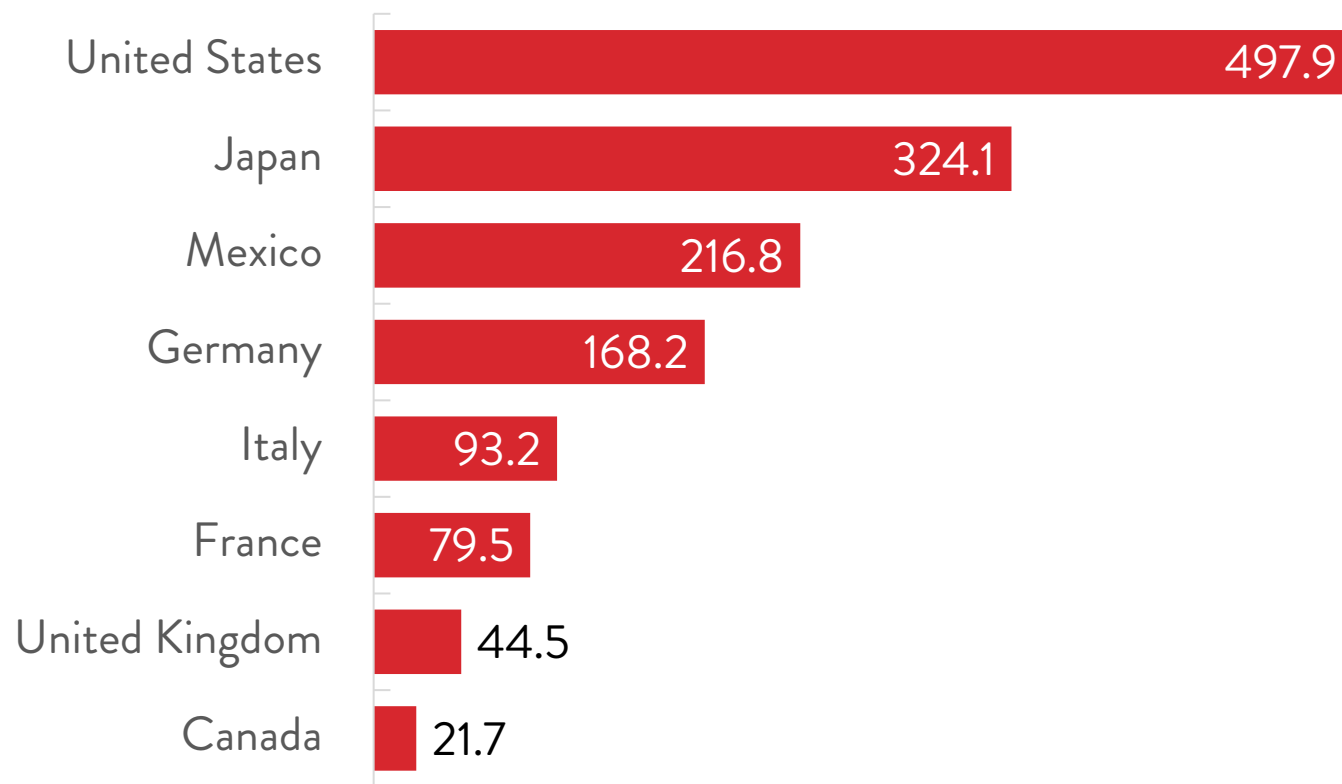
Canada (2019, millions \$)



In 2019, the latest year for which data are available, capital expenditures on pollution prevention and abatement and control in the manufacturing sector totalled \$845 million. This represented over one-third of the all-industry total of \$2.4 billion.

MANUFACTURING INVESTMENT

G7 and Mexico (2015-19 average, billions \$, PPP basis)



Source: CME.

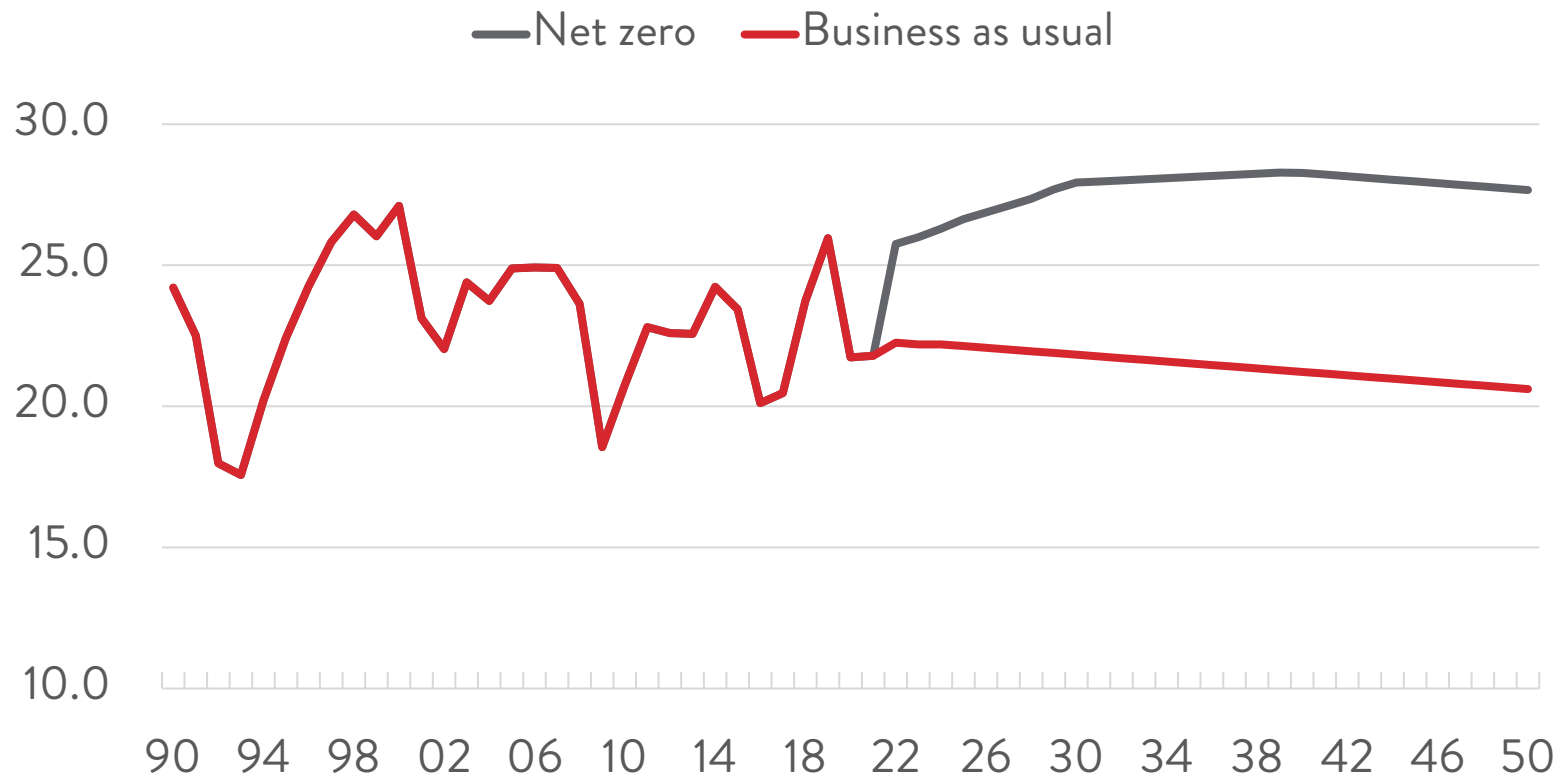


Between 2015 and 2019 manufacturing investment across 31 OECD countries averaged a total of \$1.77 trillion per year. Canada attracted less than \$22 billion annually of this investment, accounting for just 1.2% of the OECD total.

By comparison, the US received on average \$498 billion (23x Canada's amount), while Mexico received \$217 billion (10x Canada's amount).

CURRENT MANUFACTURING INVESTMENT TRENDS WON'T CUT IT

Canada (total non-residential invest., manufacturing, bill. \$ 2012)



Sources: CME; Statistics Canada.



CME conservatively estimated that taking Canadian industry to net zero will require an investment of \$180 billion between now and 2050. This averages out to \$6 billion per year.

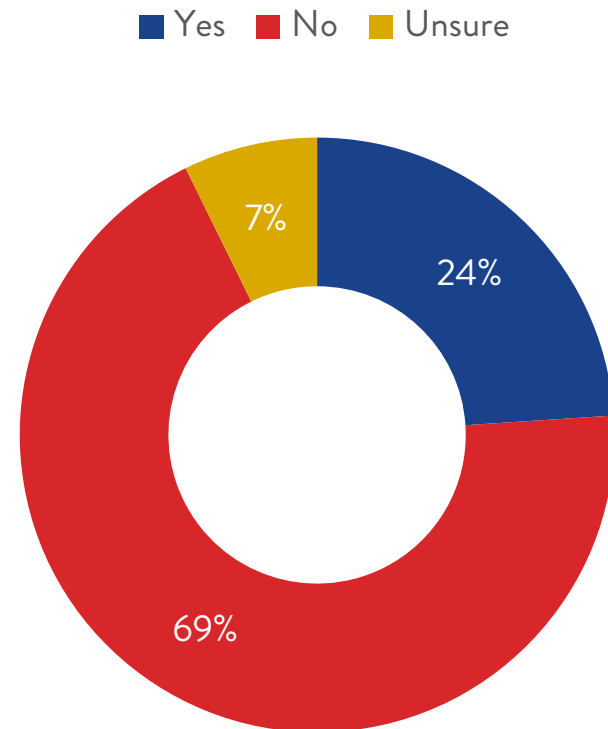
This will not be achieved under business-as-usual trends. In fact, investment will need to be about 30% higher than current trends to meet net-zero goals.



2022 Low-Carbon Transition Survey

HAS YOUR COMPANY SET A TARGET TO REACH NET ZERO GHG EMISSIONS BY 2050 OR EARLIER?

Canada

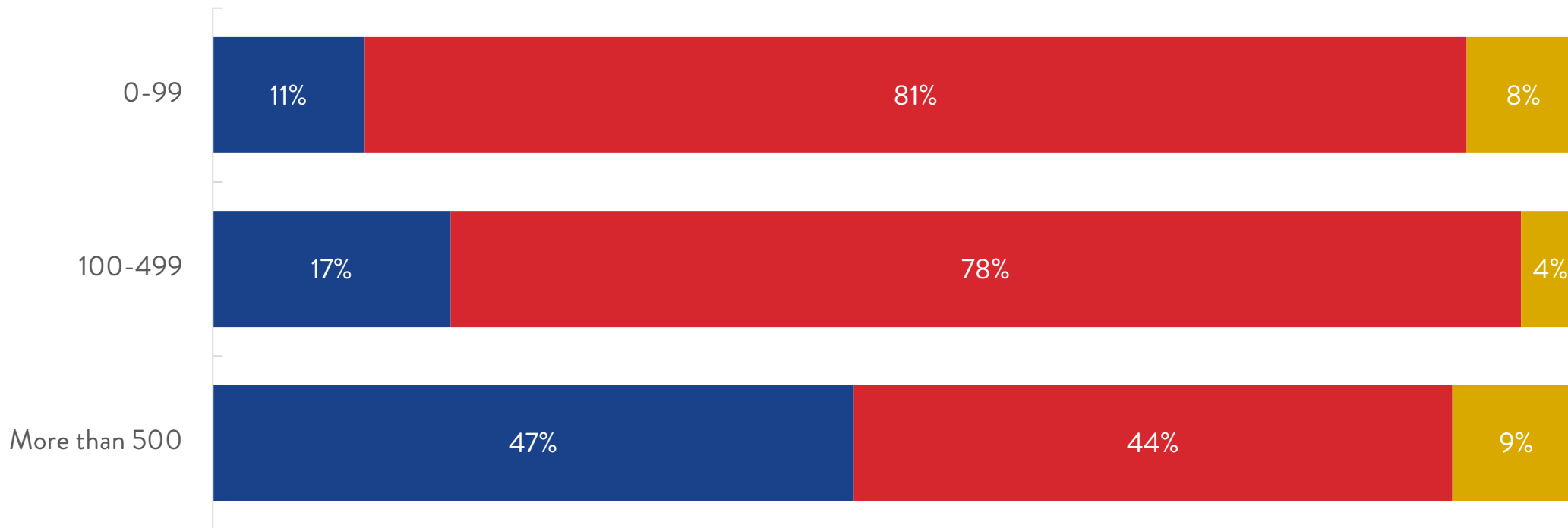


One-quarter of manufacturers surveyed have established targets to reach net-zero emissions by 2050 or earlier, 70% have not done so, and the remaining 7% are unsure about their company's sustainability policies.

HAS YOUR COMPANY SET A TARGET TO REACH NET ZERO GHG EMISSIONS BY 2050 OR EARLIER?

Canada

While nearly half of manufacturers with 500 or more employees have set a target to be carbon neutral by 2050, just a little over one-in-ten small manufacturers have done the same. These results are consistent with those from CME's 2020 Management Issues Survey.

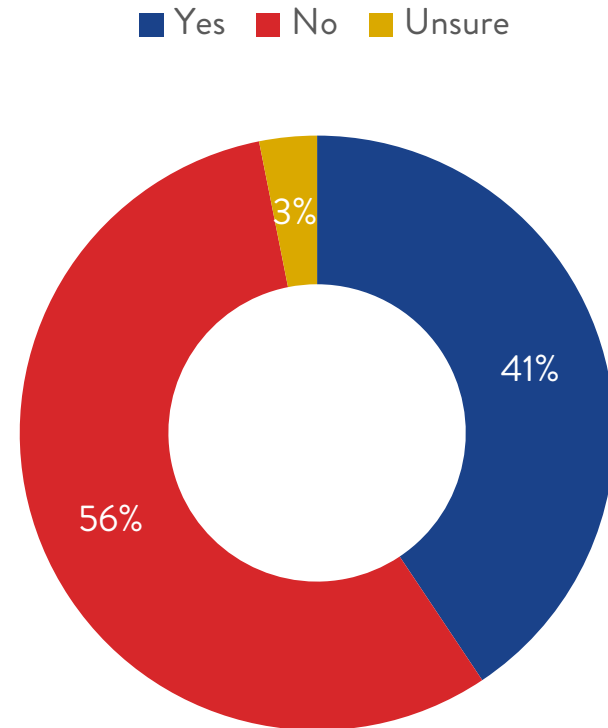


Source: CME - Low-Carbon Transition Survey.

■ Yes ■ No ■ Unsure

DOES YOUR COMPANY CURRENTLY TRACK ITS CARBON EMISSIONS?

Canada

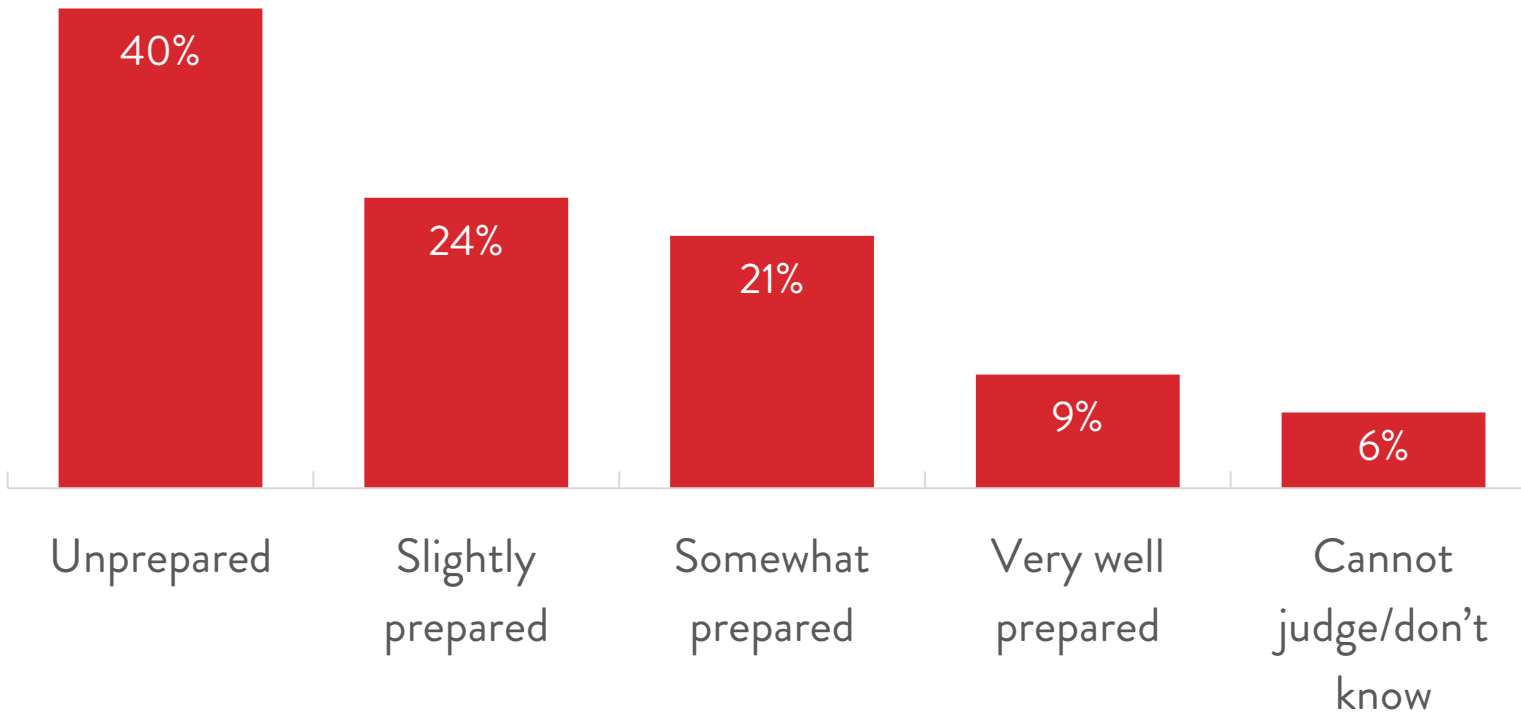


Measuring and analyzing emissions is a prerequisite to reducing GHG emissions.

41% of Canadian manufacturers were tracking their carbon emissions.

HOW PREPARED DO YOU THINK YOUR COMPANY IS TO MEET A 2050 NET-ZERO GHG EMISSIONS TARGET?

Canada

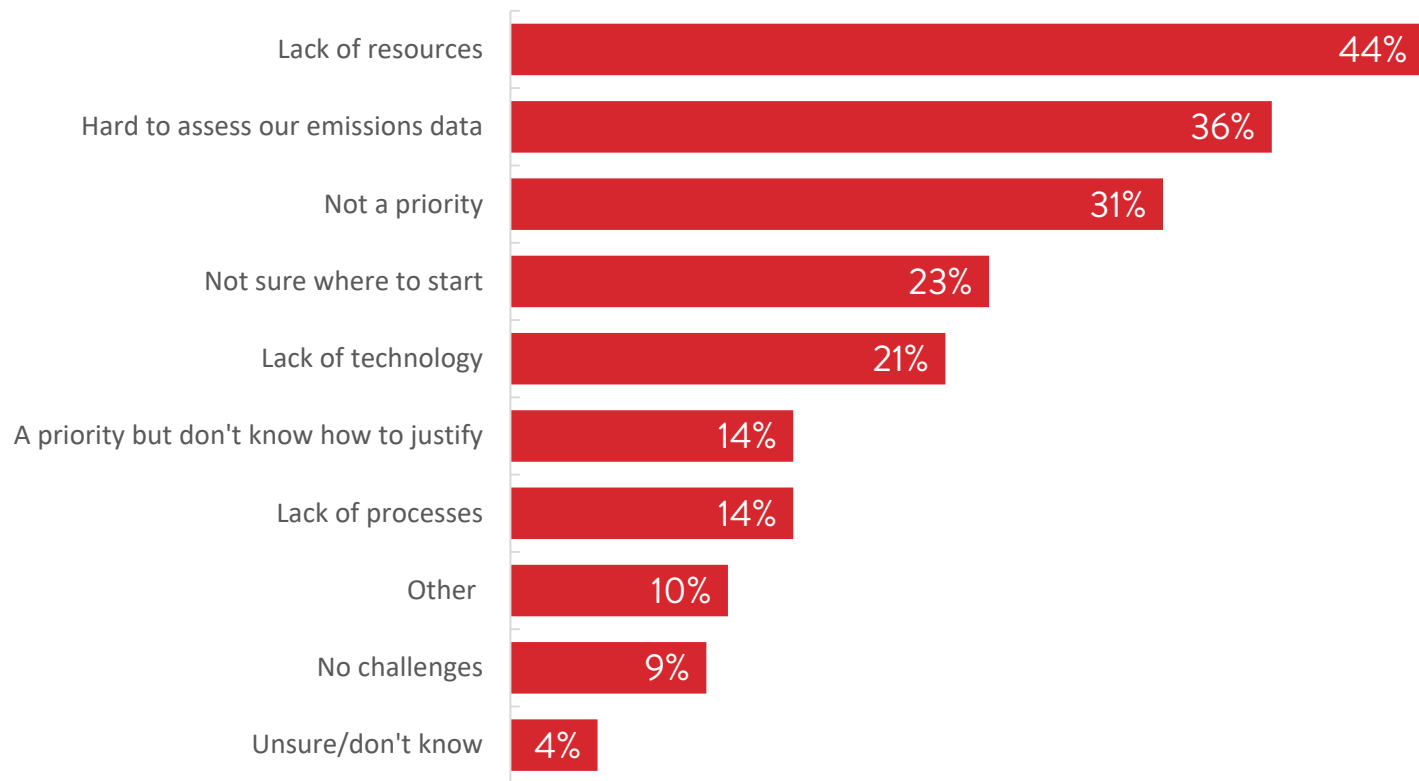


When asked to judge their company's level of preparedness to achieve carbon neutrality by 2050, 40% said they were unprepared, a significantly higher share than the 9% that said they were very well prepared.

Continuing a theme from other questions, large firms were much more likely to say that they were prepared than SMEs.

WHICH OF THE FOLLOWING CHALLENGES ARE YOU EXPERIENCING WITH YOUR NET-ZERO TARGET-SETTING AND CARBON ACCOUNTING OBJECTIVES?

Canada



Source: CME - Low-Carbon Transition Survey.



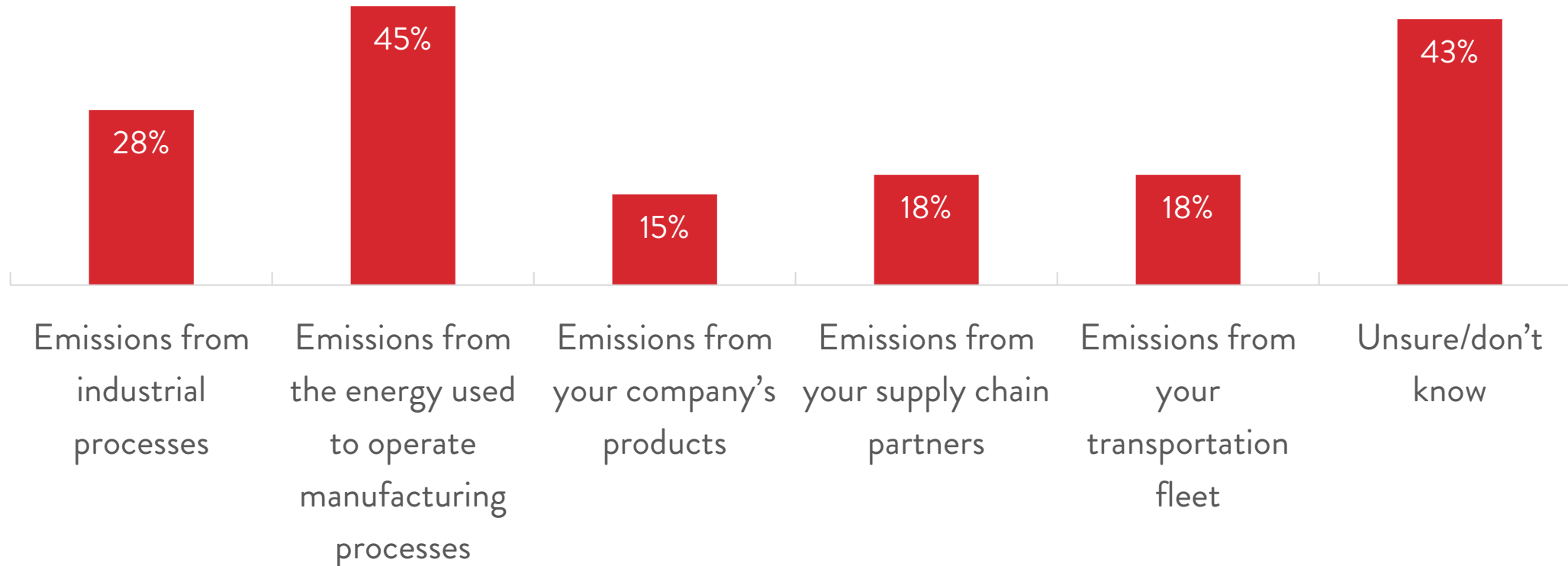
When asked to rate the biggest obstacles to setting a net-zero target, 44% of survey participants selected a lack of resources, 36% said it was hard to assess their emissions data, while 31% said setting a target wasn't a priority.

Less than 10% of firms indicated that they didn't face any hurdles with net-zero target-setting.

WHAT HAS BEEN OR WILL BE THE PRIMARY AREAS OF FOCUS IN YOUR EMISSION REDUCTION EFFORTS OVER THE NEXT THREE YEARS?

Canada

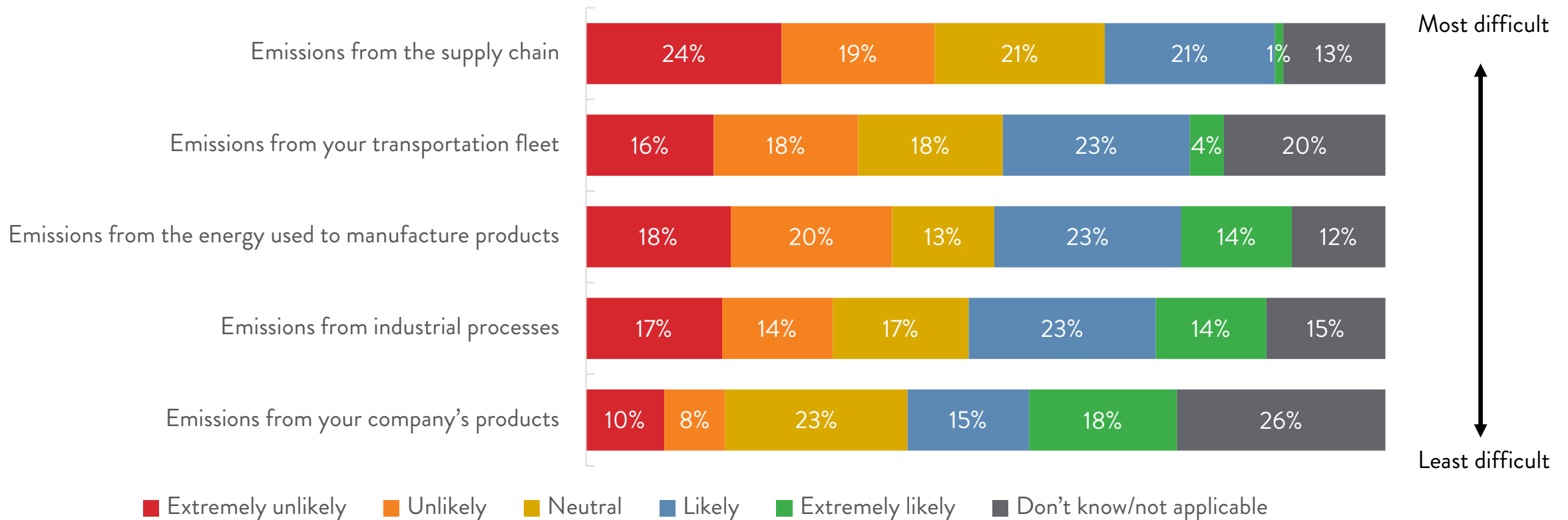
Considering all the main sources of emissions, survey participants plan to focus first on cutting emissions from those generated by the energy used to manufacture products (45%) and those generated by industrial processes (28%). A notable share of manufacturers (43%) are also unsure about or don't know what emission sources their company will focus on over the near term.



WHAT IS THE LIKELIHOOD THAT YOUR COMPANY WILL BE ABLE TO ELIMINATE EMISSIONS IN THE FOLLOWING AREAS BY 2050?

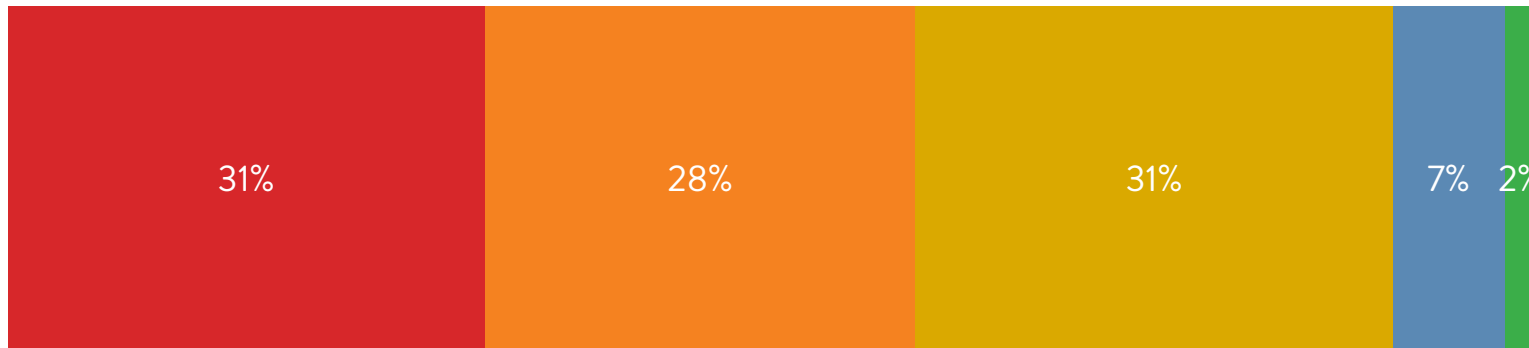
Canada

Looking over the longer term, respondents said that eliminating supply chain emissions by 2050 will be the most difficult to achieve, while eliminating emissions from their company's products will be the least difficult.



PLEASE INDICATE YOUR LEVEL OF AGREEMENT WITH THE FOLLOWING STATEMENT: GOVERNMENTS ARE DOING ENOUGH TO HELP MY COMPANY TRANSITION TO A NET ZERO ECONOMY AND REMAIN COMPETITIVE.

Canada



■ Strongly disagree ■ Disagree ■ Undecided/Don't know ■ Agree ■ Strongly agree



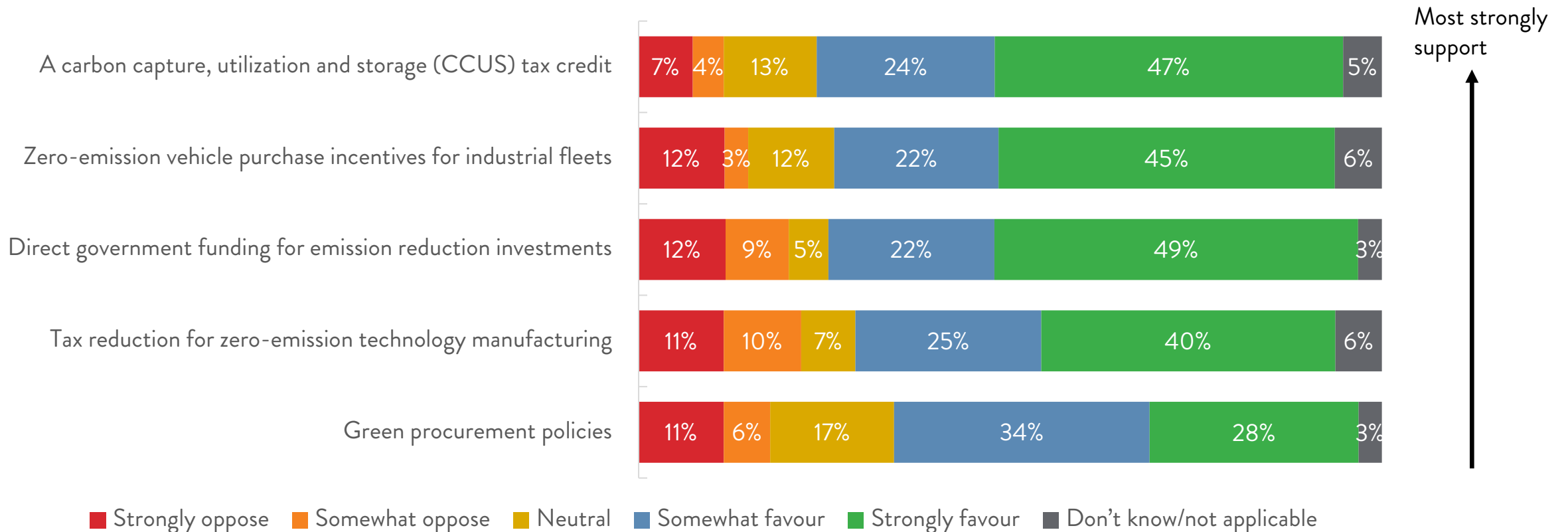
According to our survey, almost 60% of manufacturers disagreed or strongly disagreed with the statement that governments were doing enough to help their company transition to a net-zero economy and remain competitive.

In comparison, less than 10% of respondents agreed or strongly agreed with this statement.

WHAT IS YOUR LEVEL OF OPPOSITION OR SUPPORT FOR CURRENT, ANNOUNCED AND POTENTIAL GOVERNMENT POLICIES DESIGNED TO ACHIEVE NET ZERO EMISSIONS BY 2050?

Canada

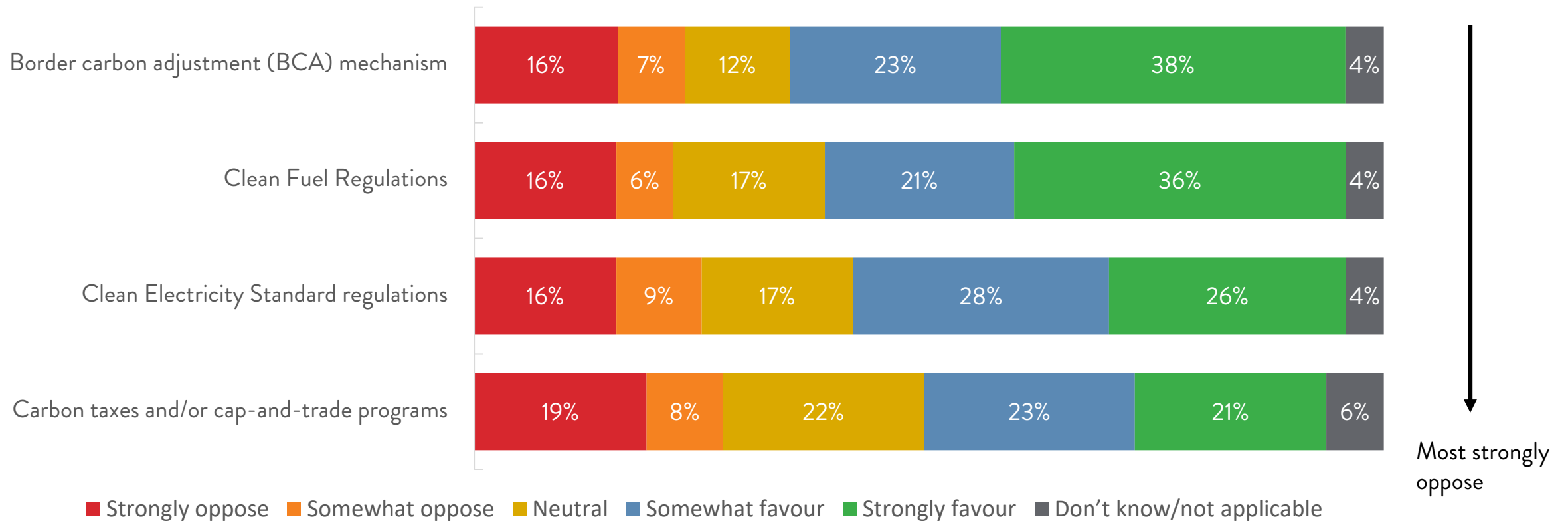
Considering all the current, future and potential federal government climate change actions, survey respondents most strongly support a CCUS investment tax credit, ZEV vehicle purchase incentives for industrial fleets, and direct government funding for emission reduction investments.



WHAT IS YOUR LEVEL OF OPPOSITION OR SUPPORT FOR CURRENT, ANNOUNCED AND POTENTIAL GOVERNMENT POLICIES DESIGNED TO ACHIEVE NET ZERO EMISSIONS BY 2050?

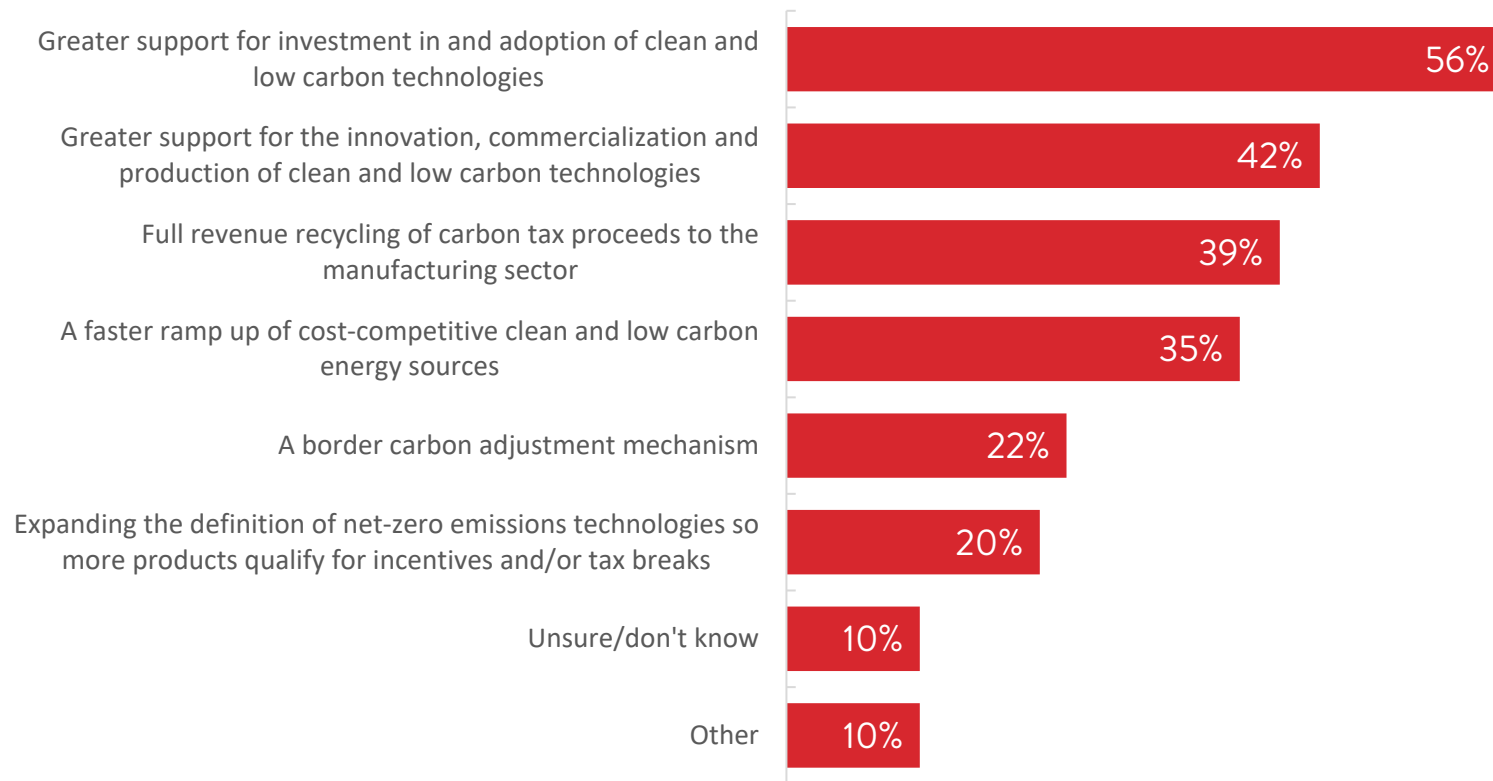
Canada

At the other end of the spectrum, manufacturers most strongly oppose carbon taxes and/or cap-and-trade programs, with Clean Electricity Standards not far behind.



WHAT ADDITIONAL GOVERNMENT MEASURES WOULD BE MOST EFFECTIVE IN HELPING YOUR COMPANY REDUCE ITS CARBON FOOTPRINT AND REMAIN COMPETITIVE?

Canada



Source: CME - Low-Carbon Transition Survey.



What additional actions should governments take to help the manufacturing sector transition to a low-carbon economy?

According to survey participants, they should provide more generous incentives to help manufacturers invest in and adopt clean and low-carbon technologies and they should provide more support to spur innovation, commercialization, and production of these same products.

KEY RECOMMENDATIONS

1. Direct investment supports for emitters of all sizes to help them adopt emissions-reduction technologies, ensuring that support approaches are technology-agnostic
2. Financial support for the creation, commercialization, and manufacturing of low- and no-carbon products in Canada through tax incentives and government procurement
3. An effective and targeted SME net-zero transition strategy, with a specific focus on education and global supply chain competitiveness
4. Support for effective energy solutions that recognize the necessity of existing supply and the urgent need to add new supply, including policies that foster the development of new technologies that contribute to the decarbonization of the energy system
5. Support for the creation and expansion of corporate carbon offset programs
6. Transition strategies that are aligned and coordinated between Canada and our key trading partners to maintain our competitiveness and to avoid carbon leakage
7. Climate policies that are aligned and coordinated between the federal and provincial governments





What Has Been Done?

US INFLATION REDUCTION ACT – ONE YEAR IN

- The *Inflation Reduction Act* introduced approximately \$400B in clean technology incentives to attract manufacturing investment in the US for strategic areas such as EV Assembly and Parts, Small Modular Reactor and Carbon Capture, Utilization and Storage (CCUS), hydrogen, clean grid development.
- Significant domestic benefits reported by the US government
 - 170,000 clean energy jobs
 - \$110 billion in clean energy manufacturing investment (\$550 billion relating to [broader legislative agenda](#) of the administration since assuming office in 2021)
 - Inflation-adjusted spending on private manufacturing and industrial construction in America at highest point since Census started tracking the data in 1964
 - Electricity rates to be cut by as much as 9 percent, gas prices lowered by 13 percent by 2030
- New global race for investment requires hard choices for Canada
 - ITCs competing with more generous and certain Production Tax Credits
 - Slow implementation pace for key federal measures preventing our sectors to capitalize on benefits

2023 CANADA BUDGET

CLEAN TECHNOLOGY MANUFACTURING TAX CREDIT

- Refundable tax credit equal to 30 per cent of the cost of investments in new machinery and equipment to manufacture or process key clean technologies
- Eligibility includes extraction / processing / recycling of critical minerals, manufacturing of renewable or nuclear energy equipment, manufacturing of grid-scale electrical energy storage equipment; zero-emission vehicles, and upstream components and materials for the above (e.g. cathode materials)
- \$4.5 billion over next five years, additional \$6.6 billion from 2028-29 to 2034-35

CLEAN ELECTRICITY TAX CREDIT

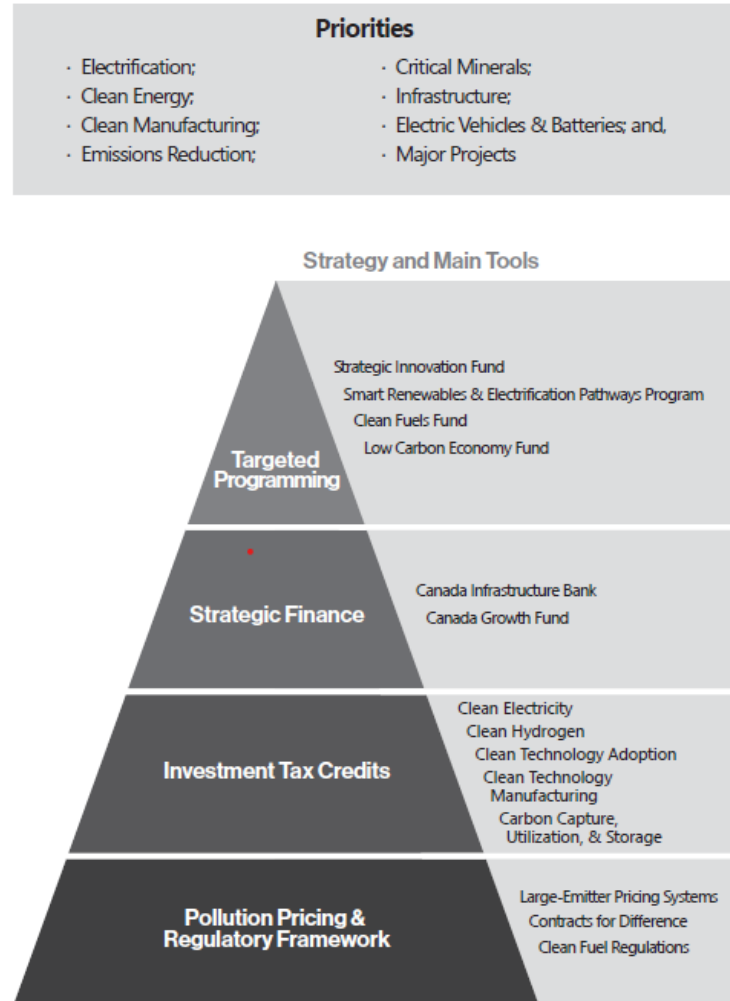
- 15 per cent refundable tax credit for eligible investments in non-emitting electricity generation systems (including nuclear, abated natural gas, hydro, solar, wind, storage and inter-provincial transmission)
- Refurbishments and large-scale nuclear are eligible

CLEAN HYDROGEN TAX CREDIT

- Design includes all types of hydrogen, but credit is more generous (up to 40%) for low-carbon production (green hydrogen)

NEW CANADA INFRASTRUCTURE BANK FOCUS

- Canada Infrastructure Bank will invest at least \$10 billion through its Clean Power priority area, and at least \$10 billion through its Green Infrastructure priority area to support major clean electricity and clean growth infrastructure projects



TECHNOLOGY INVESTMENT PROGRAM

SUPPORT AVAILABLE

- Matching contribution of up to \$50,000 to support investment in long-term production assets and technology that **increase capacity and reduce emissions on production.**
- Funded by the Federal Economic Development Agency for Southern Ontario (FedDev Ontario).

DOES MY INVESTMENT QUALIFY?

- Retroactive projects (investments in long-term production assets and technology beginning April 1, 2022) may be eligible for funding.

DOES MY COMPANY QUALIFY?

- Must be a manufacturer based in Southern Ontario.
- Must be an incorporated business (federally or provincially) for 2 years or more continuously.
- Must have greater than 15 and fewer than 500 full-time employees (FTE) in Southern Ontario.
- **This program is now fully subscribed.**



ONTARIO MADE INVESTMENT TAX CREDIT

SUPPORT AVAILABLE

- 10 per cent refundable corporate income tax credit of up to \$2 million a year (net credit amount may be lower due to other deductions)
- Available for qualifying investments up to \$20 million in a taxation year, limit prorated for a short taxation year

DOES MY INVESTMENT QUALIFY?

- Must be capital property included in Class 1 or Class 53 for capital cost allowance purposes.
- Machinery and equipment must be for use in manufacturing or processing in the province between March 23, 2023 and December 31, 2025.
- Specific rules for buildings (election letter must be filed for tax year in which a purchase is made – see subsection 1101(5b.1) under federal [Income Tax Regulations](#))

DOES MY COMPANY QUALIFY?

- Must be a Canadian-controlled private corporation. Expenditures by third-party companies (including affiliates) are not eligible
- Must have a permanent establishment in Ontario (meaning a fixed place of business including an office, a factory or a workshop)

FOR MORE INFO

- Budget Bill (See Section 97.2): https://www.ola.org/sites/default/files/node-files/bill/document/pdf/2023/2023-03/b085_e.pdf



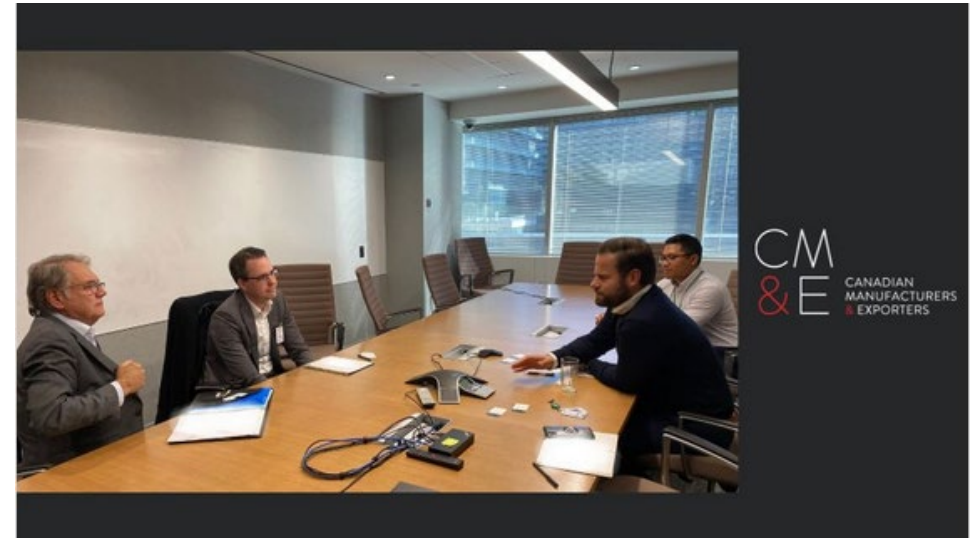
EMISSION PERFORMANCE STANDARDS (EPS)

- Price of carbon to reach \$170/ ton by 2030, setting existential challenge for hard to abate industries such as steel, cement, chemicals, pulp and paper.
- Delivery of industrial carbon tax transitioned to provincial delivery as of January 2022, with first wave of proceeds to be paid by end of 2023
- Ontario needs a reinvestment approach setting incentives for companies to maintain and grow operations in Ontario

CME POSITION

- Confirm the redistribution of Emissions Performance Standards (EPS) proceeds to emitters paying them to fund emission reduction technology
- Eligibility for projects should be broad, reflecting a technology neutral approach and relying on the operational knowledge of manufacturers

Ontario now has a carbon tax on industry. What will Doug Ford's government do with the revenue?

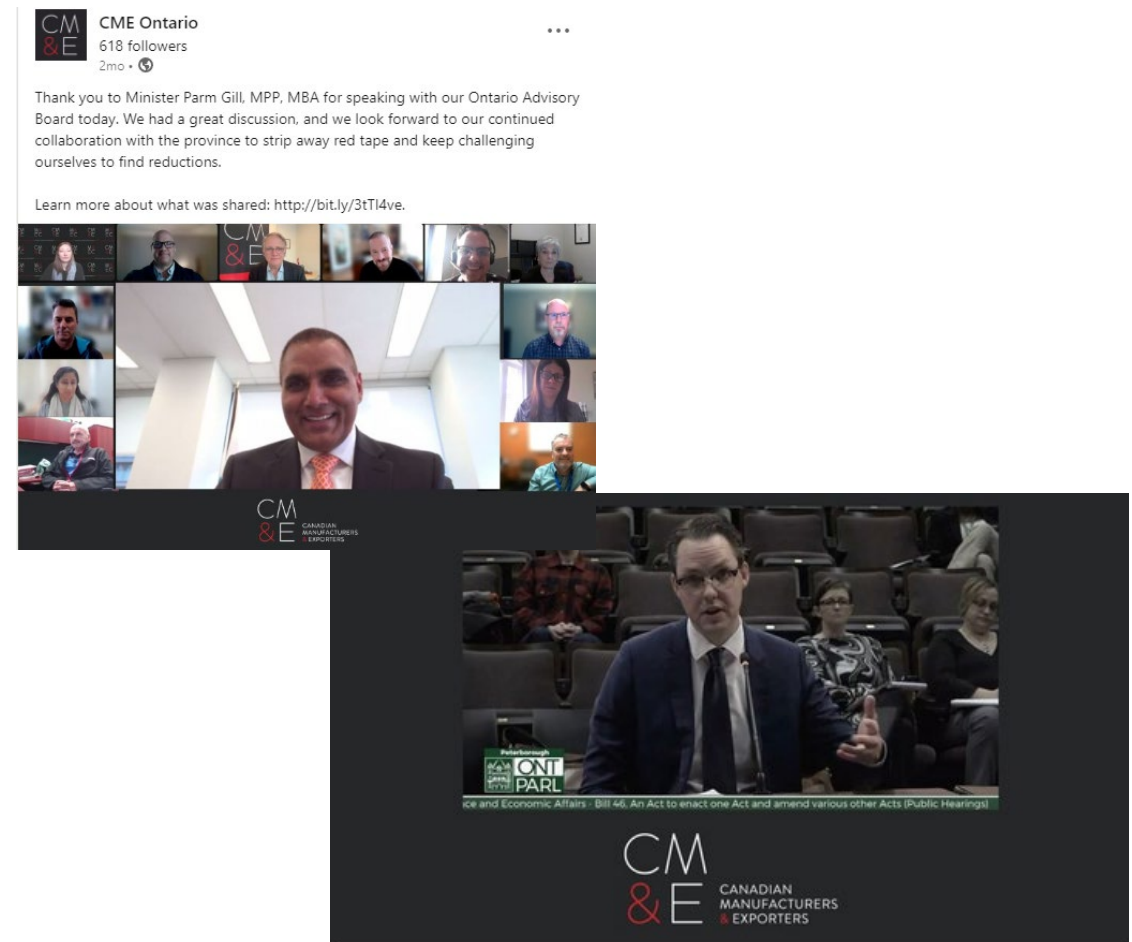


CARBON CAPTURE, UTILIZATION AND STORAGE (CCUS)

- US IRA increased the tax credit for permanent sequestration of CO₂ to \$85 per tonne and to \$60 per tonne for utilization of CO₂
- Canada introduced a 30% ITC in Budget 2022
- Ontario removed legal impediments, unveiled a policy roadmap, and moved toward demonstration projects, but Ontario remains excluded from application of federal ITC

CME POSITION

- Accelerate transition to large scale deployment by vesting underground pore spaces under provincial control, as Western provinces did (BC, Alberta, Saskatchewan)
- Review all related legislation in collaboration with industry, proactively building the regulatory capacity to oversee CCUS applications



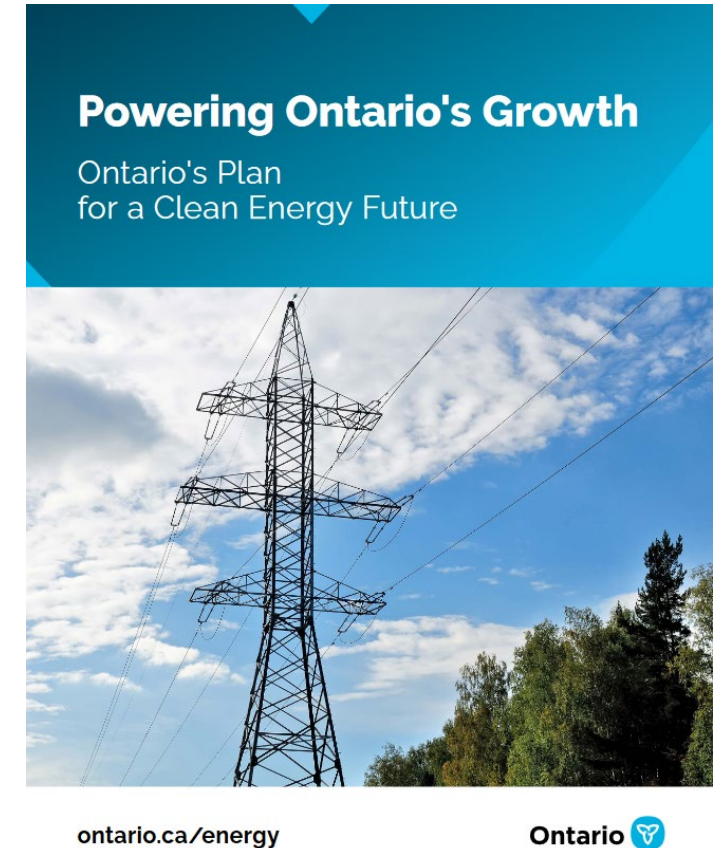
POWERING ONTARIO'S GROWTH PLAN

Summer confirmed proactive development of energy assets to address decarbonization and electricity demand, which is set to more than double by 2050

- No immediate gas generation moratorium, but setting stage for post-2035
- Starting planning for Ontario's next competitive electricity procurement focused on new clean resources including wind, solar, hydroelectric, batteries and biogas
 - NUCLEAR: Pre-development work to site first large-scale nuclear build since 1993 at the Bruce site and three additional small modular reactors at the Darlington site.
 - PUMPED STORAGE: Advancing the Ontario Pumped Storage Project and Marmora Pumped Storage Project to Ontario's first Long-Duration Storage Assessment.
 - HYDRO: Optimizing Ontario Power Generation's hydroelectric fleet to increase generation
- ENERGY EFFICIENCY: Growth of initiatives such as SaveonEnergy (confirmed in Budget 2022)
- TRANSMISSION: New lines to power the conversion from coal to power the Electric Arc Furnaces at Algoma Steel as well as growth in Northeastern and Eastern Ontario.

CME POSITION

- Ontario should build on plan by introducing new measures to keep industrial rates low.
- Natural gas has long-term role to play (with sustainable fuels and CCUS) for reliability and cost competitiveness.



ON THE HORIZON

Several enablers for a competitive transition to a low carbon economy expected in coming months

- Ontario's Advanced Manufacturing Strategy
- Electrification and Energy Transition Panel report
- EPS Proceeds Distribution Approach
- Creating a market pull for low carbon Ontario goods through weighted criteria in provincial procurement (BOBI)
- Mitigating costs under Blue Box and other EPR programs
- Urgent need for regulatory clarity on key federal measures:
 - Clean Technology Manufacturing ITC
 - Clean Electricity ITC
 - Clean Electricity Standards
 - Canada Growth Fund



CM
& E

CANADIAN
MANUFACTURERS
& EXPORTERS

A large industrial robot arm, primarily orange and black, is positioned in a factory setting. The background is a blurred view of a manufacturing plant with various machinery and structures. The text 'THANK YOU' is overlaid in a large, black, serif font across the center of the image.

THANK YOU

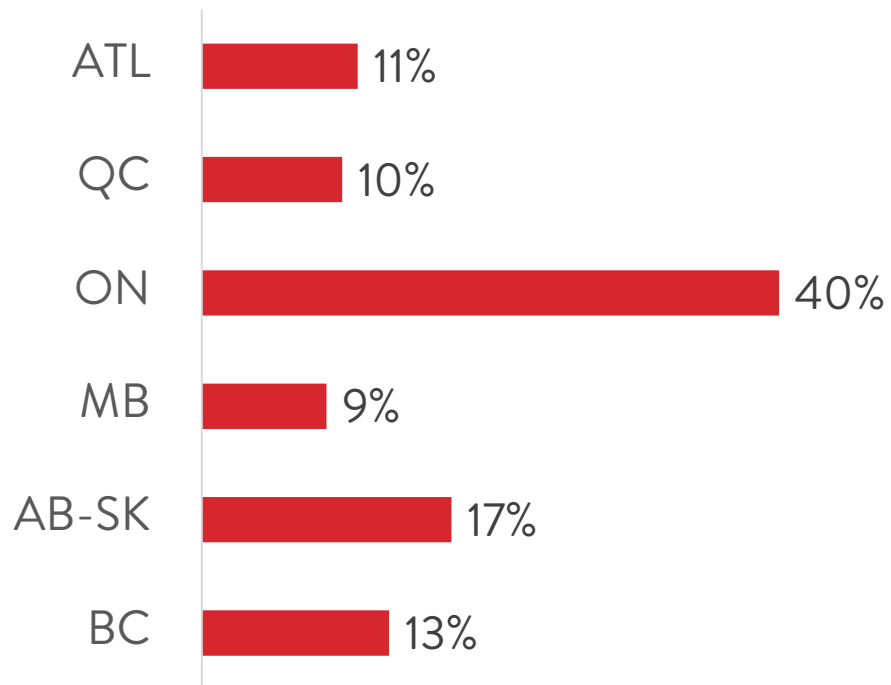


APPENDIX

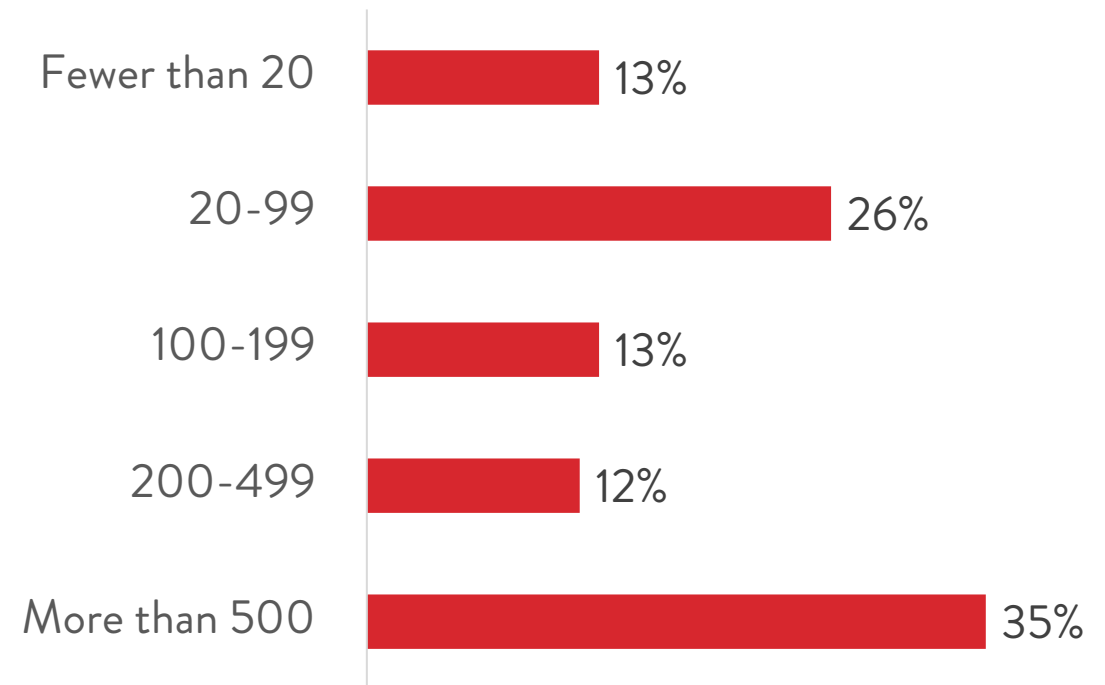
LOW CARBON SURVEY - RESPONDENT PROFILE

We surveyed 96 manufacturers with a diverse range of business sizes from across the country in Spring 2022:

Regional Distribution

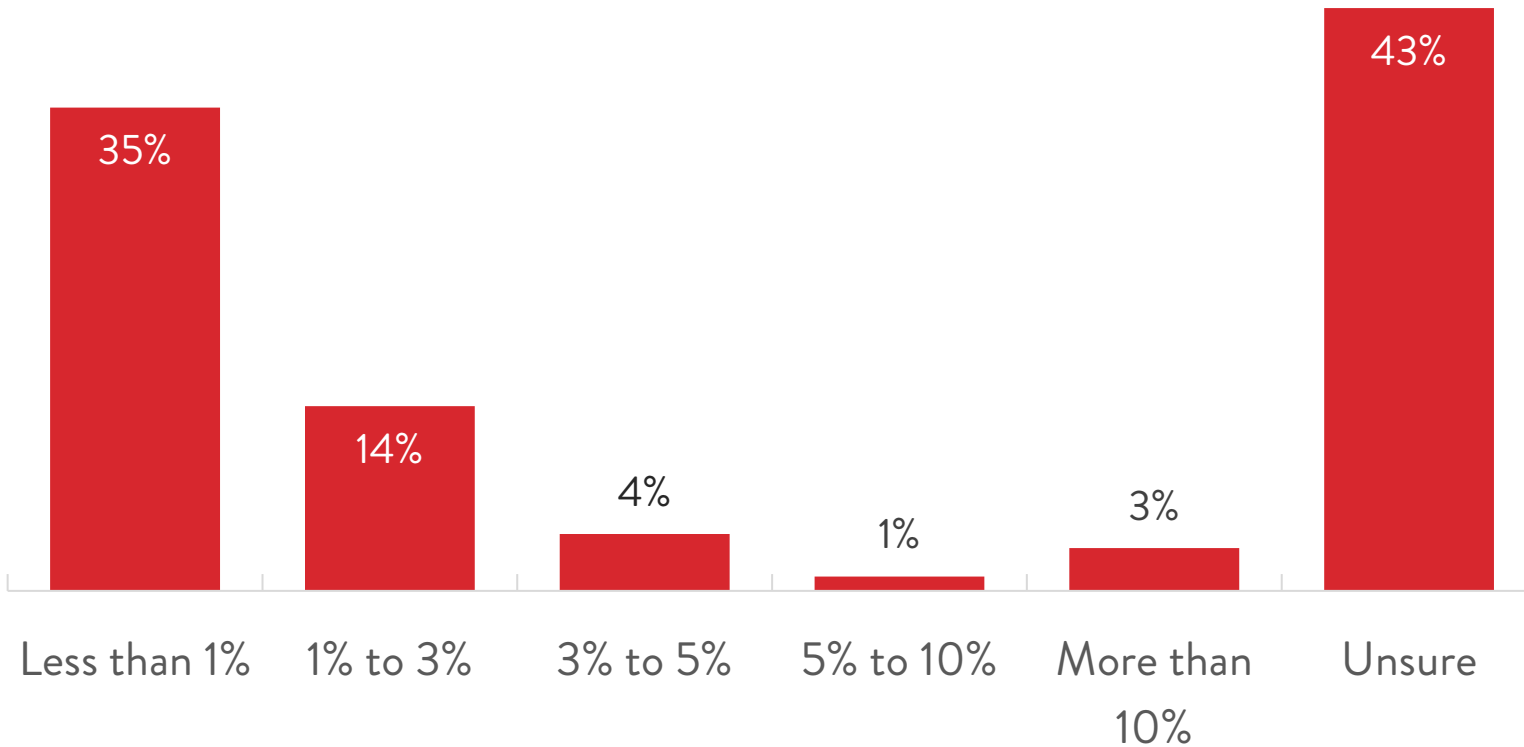


Firm Size Distribution (no. of employees)



OVER THE NEXT THREE YEARS, HOW MUCH DOES YOUR COMPANY PLAN TO SPEND ON EMISSION REDUCTION INVESTMENTS AS A PERCENTAGE OF YOUR SALES REVENUE?

Canada



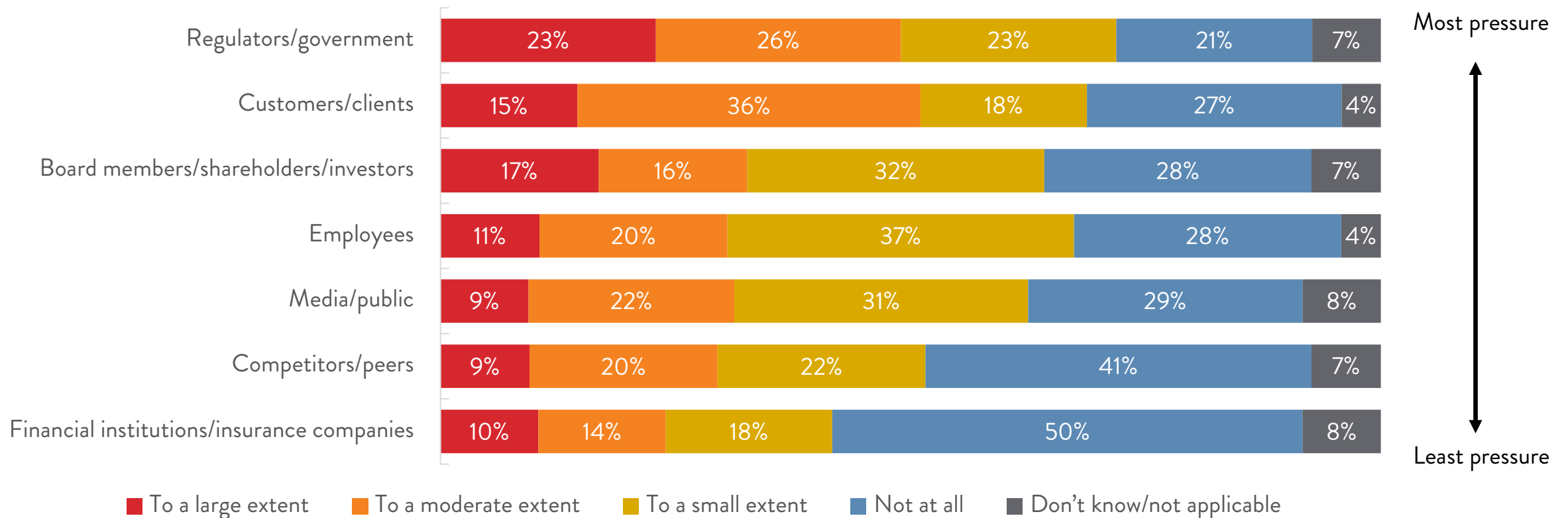
When asked how much their company plans to spend on emission reduction investments over the next three years, most either plan on spending less than 1% of sales revenue (35%) or are unsure (43%).

Less than 10% of respondents plan on spending 3% or more of their sales revenue on such investments over the near term.

TO WHAT EXTENT DOES YOUR COMPANY FEEL PRESSURE TO ACT ON CLIMATE CHANGE FROM YOUR STAKEHOLDERS?

Canada

When considering the industry's various stakeholders, manufacturers feel the most pressure to act on climate change from governments and feel the least amount of pressure from financial institutions.



SUMMARY

- Only one-quarter of manufacturers have established targets to reach net-zero emissions by 2050 or earlier, with smaller firms much less likely to have set targets than larger ones
- A little over 40% of respondents said their company is currently tracking their carbon emissions
- When asked to rate the biggest obstacles to setting a net-zero target, 44% of manufacturers cited a lack of resources, 36% said it was hard to assess their emissions data, and 31% said setting a target wasn't a priority
- When considering all current, future and potential federal government climate change actions, survey respondents most strongly support a CCUS investment tax credit, ZEV vehicle purchase incentives for industrial fleets, and direct government funding for emission reduction investments, while they most strongly oppose carbon taxes and/or cap-and-trade programs
- Most manufacturers believe that governments are not doing enough to help the industry transition to a net-zero economy and remain competitive
- According to survey participants, governments should be providing more generous incentives to help manufacturers invest in and adopt clean and low-carbon technologies and they should provide more support to spur innovation, commercialization, and production of these same products