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2025 Greening Freight Programs Industry Survey

Final Report

Prepared for Natural Resources Canada

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2025 Greening Freight Programs Industry Survey Final Report

Prepared for Natural Resources Canada
Supplier name: Phoenix Strategic Perspectives Inc.
March 2025

This public opinion research report presents the results of a 16-minute telephone survey of 301 representatives of the Canadian freight transportation industry who were involved in or knowledgeable about the management or implementation of trucking fuel efficiency programs and policies within the business' fleet of vehicles. The fieldwork was conducted from January 14 to February 7, 2025.

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Executive Summary

Phoenix Strategic Perspectives (Phoenix SPI) was commissioned by the department of Natural Resources Canada (NRCan) to conduct survey research with Canadian freight industry representatives to assess awareness and uptake of fleet energy assessments, truck and trailer retrofits and engine repowers, as well as awareness and participation in green freight programs.

1. Background and Objectives

The Greening Freight Programs (*SmartWay*, *SmartDriver*, and the Green Freight Program) are three programs administered by NRCan that provide training, tools, and resources to help Canada's fleets lower their fuel consumption, operating costs, and harmful vehicle emissions. Specifically:

- The *SmartWay* program helps to reduce fuel costs and emissions and to increase efficiency in the transportation industry. The *SmartWay* Transport Partnership is a program designed to help businesses benchmark their operations and reduce fuel costs while transporting goods in the cleanest most efficient way possible.
- The *SmartDriver* training series offers free online courses, including in-classroom and on-road instructor resources, to help professional drivers of medium and heavy-duty commercial vehicles reduce fuel consumption, operating costs and harmful vehicle emissions.
- The Green Freight Program (GFP) helps fleets reduce their fuel consumption and greenhouse gas emissions through fleet energy assessments, fleet retrofits, engine repowers, logistical best-practice implementation, and the purchase of low carbon vehicles.

The purpose of the research was to assess perspectives on reducing fuel use and improving energy efficiency in freight transportation among the industry. The Department has previously conducted surveys on this topic in Fall 2018, Winter 2022, Fall 2022/Winter 2023, and Fall 2023/Winter 2024.

The results of this study will help inform future public policy to help Canadian fleets lower their fuel consumption, operating costs and vehicle emissions.

2. Methodology

A 16-minute telephone survey was conducted with a random sampling of 301 representatives of the Canadian freight transportation industry who occupy a position of owner/operator or senior level manager.

The sampling frame was purchased from Dun & Bradstreet (D&B Canada) and drawn from NAICS code 4841 (General Freight Trucking)—specifically: 48411 (Local) and 48412 (Long Distance) and NAICS code 4842 (Specialized Freight [except Used Goods] Trucking Local—specifically: 484220 (Local) and 484230 (Long Distance).

All respondents were involved in, or knowledgeable about, the management or implementation of trucking fuel efficiency programs and policies within the business' fleet of vehicles. Forty-four

percent (44%) of respondents described themselves as very knowledgeable in this regard and 56% as somewhat knowledge.

The results were weighted to reflect the actual distribution of businesses operating in this sector in Canada and can be considered accurate to within $\pm 6\%$, 19 times out of 20. The margins of error are greater for results pertaining to subgroups and smaller samples within the total survey sample.

The fieldwork was conducted from January 14 to February 7, 2025. More information on the methodology can be found in the Appendix: [Technical Specifications](#).

3. Summary of Findings

Company and Fleet Profile

A total of 301 representatives of freight transportation companies participated in this survey, with companies distributed regionally as follows: 8% have their head office in Atlantic Canada, 22% in Quebec, 31% in Ontario, and 39% in the West.¹ Most companies have fewer than 100 employees: 32% have up to 4 employees, 10% 5 to 9 employees, and 36% 10 to 49 employees. Twelve percent of companies have 50 or more employees.

The type of fleet reported by companies varies, with 37% exclusively operating for-hire fleets and 38% exclusively operating private fleets. Among the rest, almost one-quarter (23%) operate both for-hire and private fleets. In terms of ownership, 63% of companies exclusively own the trucks in their fleet, while 5% exclusively lease. The rest (32%) have trucks in their fleets that are both owned and leased. The median number of trucks in the fleets of responding companies was 10 trucks, and approximately four in 10 companies (42%) have between one and nine trucks that are less than five years of age.

More companies use their trucks for short (62%) or long (63%) hauls than for regional hauls (55%). Ninety-seven percent of companies operate trucks powered by diesel, with the top three types of trucks being dry vans (42%), flatbeds (24%), and specialized (20%).

Government Funding Programs

The majority of freight industry representatives surveyed believe government funding programs that support fleet retrofits are important, with 25% saying they are somewhat important and 32% very important. Familiarity with federal green transportation programs is growing, with a little over two-thirds (68%) of respondents saying they are familiar with at least one program (compared to 57% in 2024). Approximately two in 10 companies participate in a green transportation program, such as the SmartWay Transport Partnership program (7%), the Green Freight Program: Stream 1 'Assess and Retrofit' (5%), and Quebec's Programme Écocamionnage (3%).

¹ Companies were sampled in proportion to the population by region. Companies headquartered in the Territories represent 0.18% of population. The survey sample, therefore, does not include any companies from the Territories.

Fleet Energy Assessments

One in 10 (11%) companies have had a third party conduct an energy assessment of their fleet. Among companies that have not had an energy assessment, two in 10 (20%) attributed this to lack of awareness. Other reasons for not considering a fleet energy assessment related to lack of need, lack of value, and cost.

Retrofits

Approximately one-quarter (24%) of surveyed companies have implemented truck retrofits in the past year. Among those that completed retrofits, 65% installed cab heaters, while just over four in 10 adopted telematics (46%), route optimization technology (44%), cab coolers (42%), and low rolling resistance tires (42%). Cost remains the primary barrier to retrofitting, with over half (59%) of respondents citing it as a challenge—an increase from 39% in 2024 and 29% in 2023.

Refuelling/Charging Infrastructure

When asked how their company charges or refuels its fleet, 37% of respondents reported using on-site fuel tanks, while 34% cited public CNG stations. Only 8% utilize on-site charging stations, and 2% recharge at dealerships (e.g., for hydrogen). Additionally, 10% of freight representatives indicated that their company is considering installing charging or refueling infrastructure for zero-emission trucks at their depot. Cost and perceived lack of need were the primary reasons for not pursuing this infrastructure.

Fuel Efficiency Measures

The vast majority (91%) of companies monitor at least some aspects of their fleet's fuel efficiency. The most commonly tracked metrics include total kilometers travelled (91%), fuel consumption (85%), driving habits (71%), average speed (67%), and idle time (64%). To track these efficiency metrics, half (50%) of the companies use electronic logging devices, while 26% rely on telematics devices and 24% use manual calculations.

4. Notes to Readers

- All results are expressed as percentages, unless otherwise noted. Throughout the report, percentages may not always add to 100 due to rounding and/or multiple responses being offered by respondents.
- As noted, the total number of survey respondents is 301. At times, however, the number of respondents changes in the report because questions were asked of sub-samples of the survey population. For example, the series of questions about retrofits was asked only of the 71 companies that implemented retrofits to their truck fleet in the last year. Accordingly, readers should be aware of this and exercise caution when interpreting results based on sub-samples of the 301 survey respondents. The question wording, the number of respondents, and the target population is show under each figure in the report.
- This report discusses differences in survey responses by selected segments, or subgroups, of the survey sample, including location of company headquarters (Question 4), company size (Question 5), fleet size (Question 27), type of fleet (Question 25), awareness of Provincial and Territorial programs for greening freight transportation (Question 9), and familiarity (Question 8) and participation (Question 10) in green transportation programs.

- These differences are reported, where applicable, on a question-by-question basis immediately following the graph presenting the question results. If subgroup differences are not discussed for certain questions, it can be assumed that there were no significant differences of note.
- Only subgroup differences that are statistically significant at the 95% confidence level, pertain to a subgroup sample size of more than n=20 are, or are part of a pattern or trend are discussed in the report.
- Where relevant, results are compared to similar surveys conducted in Fall 2018, Winter 2022, Fall 2022/Winter 2023, and Fall 2023/Winter 2024. For ease of reference throughout the report, the survey conducted in Winter 2022 is referred to as “2022”, the survey conducted in Fall 2022/Winter 2023 is referred to as “2023”, and the survey conducted in Fall 2023/Winter 2024 is referred to as “2024”.
- The survey questionnaire is [appended](#) to the report.
- The contract value was \$75,400.38 (including applicable taxes).

Statement of political neutrality

I hereby certify as a Senior Officer of Phoenix Strategic Perspectives that the deliverables fully comply with the Government of Canada political neutrality requirements outlined in the *Communications Policy* of the Government of Canada and Procedures for Planning and Contracting Public Opinion Research. Specifically, the deliverables do not contain any reference to electoral voting intentions, political party preferences, standings with the electorate, or ratings of the performance of a political party or its leader.



Alethea Woods
President
Phoenix Strategic Perspectives Inc.

Detailed Findings

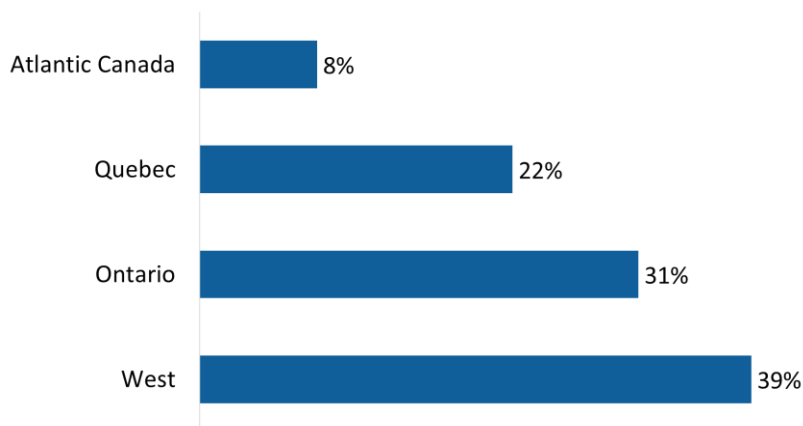
1. Profile of Responding Companies

This section provides a profile of the companies represented in the survey. Information about these companies' fleets can be found in [Section 2: Fleet Profile](#).

More than two-thirds of head offices are located in the West or Ontario.

Freight transportation companies were sampled proportionally by region, with the majority reporting head offices in western Canada (39%) or Ontario (31%).

Figure 1: Location of head office

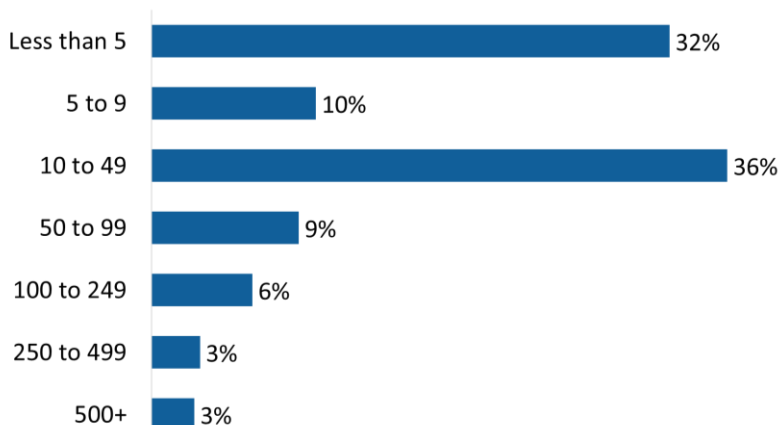


Q4. In which province or territory is your company's head office located? Base: n=301; All respondents.

Approximately three-quarters of companies employ fewer than 100 employees.

The majority of survey respondents represent small companies, with 78% employing fewer than 100 employees. Specifically, 32% have up to four employees, 10% five to nine employees, and 36% 10 to 49 employees. Nine percent of companies are medium in size, employing 100 to 499 employees and the rest (3%) are large, with 500 or more employees.

Figure 2: Size of Company – Employees

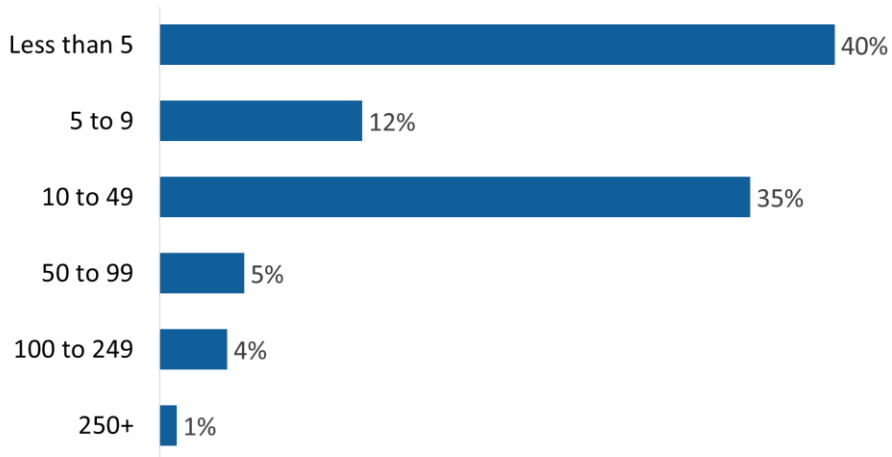


Q5. How many employees work for your company? Base: n=301; All respondents.

Nine in 10 companies employ fewer than 100 drivers.

Approximately nine in 10 (92%) companies employ fewer than 100 drivers. Specifically, 35% employ 10 to 49 drivers, 12% five to nine, and 40% up to four drivers. Only 5% of companies employ 100 or more drivers. The median number of drivers employed by the responding companies is eight drivers.

Figure 3: Number of drivers employed by responding companies



Q6. How many of these employees are employed as drivers for your company? Base: n=301; all respondents. [No response: 2%]

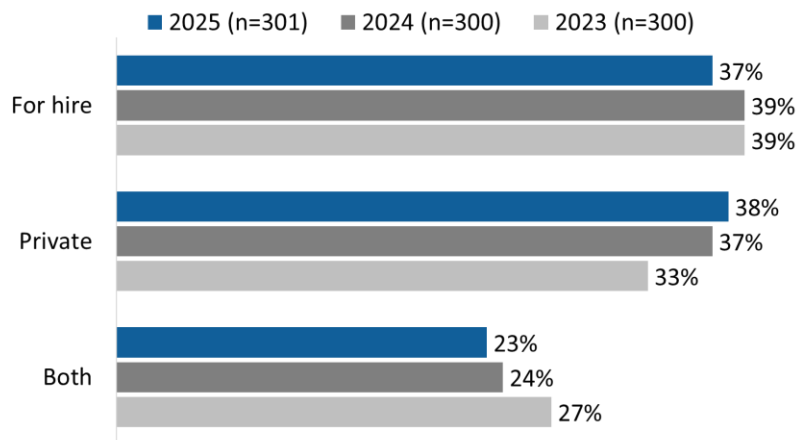
2. Fleet Profile

This section of the report presents a profile of the truck fleets of responding companies.

Fleet type continues to be varied.

The type of fleet reported by companies continues to be varied, with 37% exclusively operating for-hire fleets and 38% exclusively operating private fleets. Among the rest, almost one-quarter (23%) operate both for-hire and private fleets. Year-over-year changes are not significant.

Figure 4: Type of Fleet



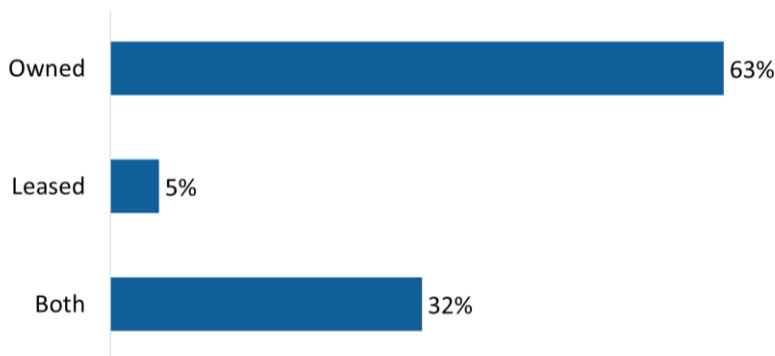
Q25. Is your fleet... Base: all respondents. [Don't know: 2%].

Consistent with 2024, companies based in Quebec (80%) are the most likely to operate a private fleet. This finding is based on responses to Question 25 (Type of Fleet), analyzed by responses to Question 4 (Company Headquarters).

Majority of trucks in fleets are owned.

Almost two-thirds (63%) of surveyed companies exclusively own the trucks in their fleet, while 5% exclusively lease. The rest (32%) have trucks in their fleets that are both owned and leased.

Figure 5: Truck ownership



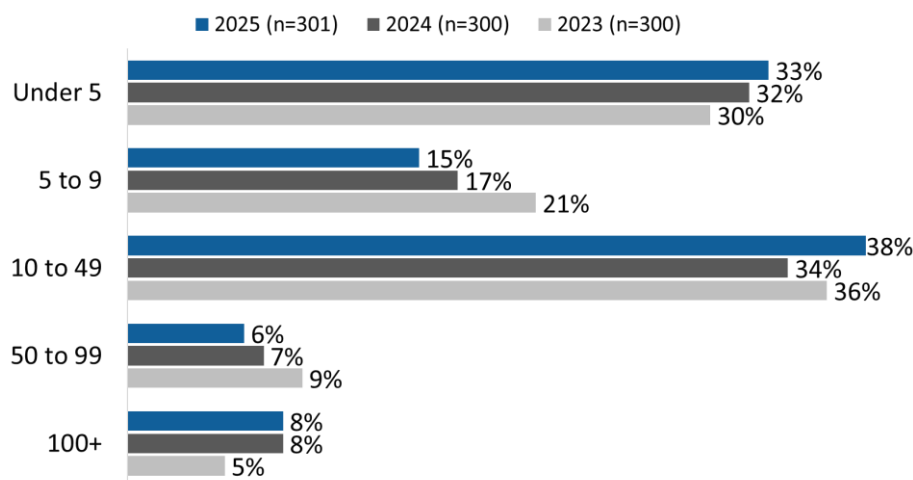
Q26. Are the trucks in your fleet...? Base: n=301; all respondents.

Companies with fewer than five employees (76%) are more likely than larger companies to own the trucks in their fleet (60% of companies with 5 to 99 employees and 46% of companies with 100+ employees). This finding is based on responses to Question 26, analyzed by responses to Question 5 (Company size, based on number of employees).

Almost half of companies have fleets of fewer than 10 trucks.

Almost half of companies operate fleets of fewer than 10 trucks—specifically, 33% have one to four trucks and 18% have five to nine trucks. Over one-third (38%) have 10 to 49 trucks in their company fleet, while the rest (14%) have 50 or more trucks. The median number of trucks in the fleets of responding companies was 10. Fleet size has changed very little since 2023.

Figure 6: Number of trucks



Q27. How many trucks are in your company's fleet? Base: all respondents. [Don't know: 2%].

The number of trucks in a company's fleet generally corresponds to company size—for example, companies with fewer than five trucks are more likely to have no more than five employees. This finding is based on responses to Question 27, analyzed by responses to Question 5 (Company size).

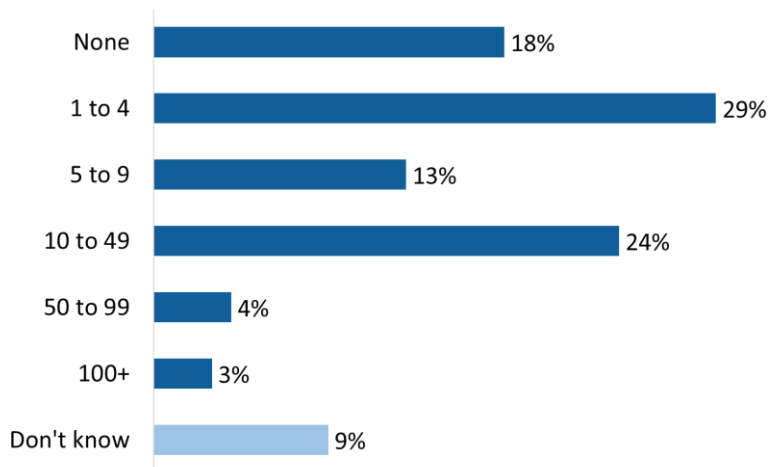
Almost two in 10 companies have no trucks in their fleet that are under five years old.

Eighteen percent of companies surveyed have no trucks in their fleet that are less than five years old. Four in 10 have between one and four (29%) or five and nine (13%) trucks that are less than five years old. The rest of the companies surveyed have at least 10 trucks in their fleet that are less than five years old.

Among the surveyed companies:

- 12% said **up to 25%** of their fleet is under five years old.
- 19% said **26–50%** of their fleet is under five years old.
- 17% said **51–75%** of their fleet is under five years old.
- 25% said **more than 75%** of their fleet is under five years old.

Figure 7: Number of trucks in fleet less than five years old



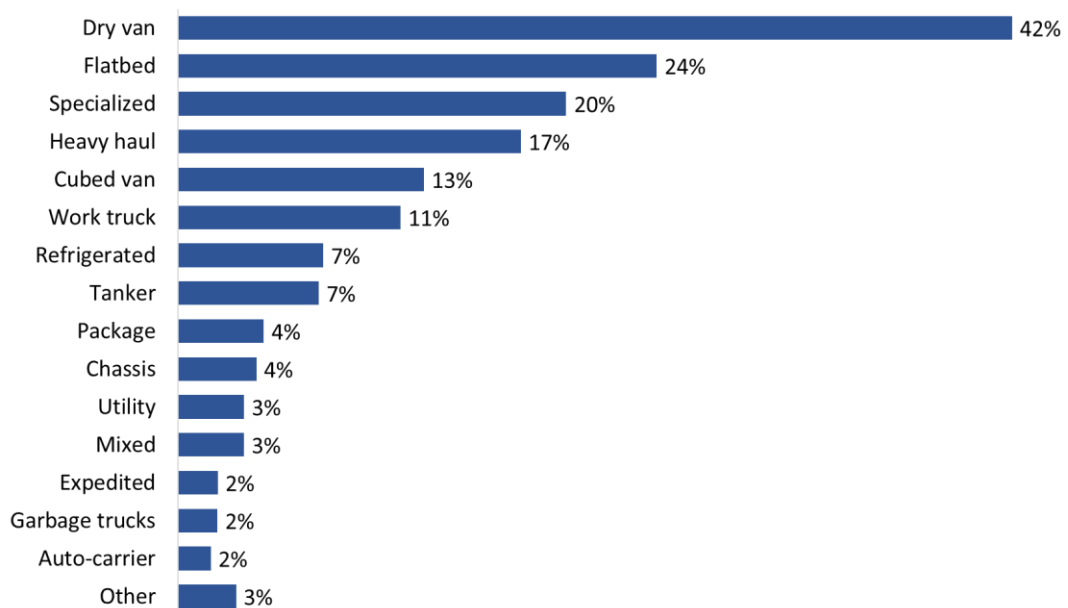
Q31. How many trucks in your fleet are less than five years old? Base: n=301; all respondents.

Companies with fewer than five employees are more likely than companies with five or more employees to have no trucks in their fleet that are less than five years old. This finding is based on responses to Question 31, analyzed by responses to Question 5 (Company size).

Companies have diverse truck fleets, with dry vans making up the largest proportion.

Four in 10 (42%) freight transportation companies surveyed have dry vans in their fleet, while 24% have flatbeds, and 20% have specialized trucks. All other types of trucks were mentioned by smaller numbers and can be found listed below in figure 8.

Figure 8: Type of trucks in fleet



Q32. What type of trucks are in your company's fleet? [Multiple responses accepted] Base: n=301; All respondents.

Companies with 100 or more employees are more likely than companies with 99 or fewer employees to have dry vans and heavy haul trucks. This finding is based on responses to Question 32, analyzed by responses to Question 5 (Company size).

Compared to 2024, the top four types of trucks in the fleets of surveyed companies remain the same: dry van, flatbed, specialized and heavy haul.

Figure 9: Type of trucks in fleet (over time)

Type of Trucks	2025 (n=301)	2024 (n=300)	2023 (n=300)
Dry van	42%	49%	41%
Flatbed	24%	18%	22%
Specialized	20%	17%	13%
Heavy haul	17%	14%	25%
Cubed van	13%	12%	13%
Work truck	11%	6%	7%
Refrigerated	7%	13%	9%
Tanker	7%	7%	4%
Package	4%	1%	2%
Mixed	3%	1%	3%
Expedited	2%	2%	3%

More companies use their trucks for short or long hauls than for regional hauls.

Approximately six in 10 companies surveyed use their trucks for long (63%) and short (62%) hauls, while just over half (55%) reported using them for regional deliveries.

Figure 10: Use of trucks



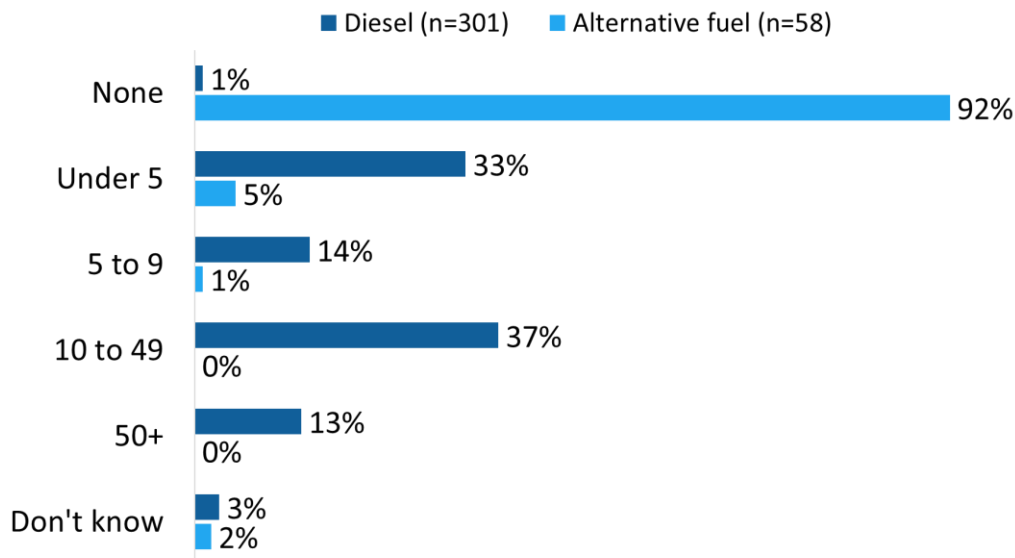
Q33. Are your trucks used for...? [Multiple responses accepted] Base: n=301; all respondents.

Companies with fewer than five employees are less likely than larger companies to use their trucks for long (51%, compared to 66% of companies with five to 99 employees and 80% with 100+ employees) and regional (38%, compared to 58% and 83%, respectively) hauls. This finding is based on responses to Question 33, analyzed by responses to Question 5 (Company size).

Vast majority of companies use diesel to power their fleets.

Ninety-seven percent of freight transportation representatives surveyed said that at least one truck in their fleet is powered by diesel. Conversely, 6% of companies power at least one truck in their fleet by an alternative to diesel.

Figure 11: Fuel use



Q28. How many trucks in your company's fleet are powered by diesel? Base: all respondents.

Q29. How many trucks in your company's fleet are powered by an alternative fuel to diesel? Base: companies that don't power all vehicles by diesel.

Among the surveyed companies, 95% reported that between 76% and 100% of their fleet is powered by diesel. Conversely, just 1% of companies using an alternative to diesel power more than 75% of their fleet with alternative fuels.

Many companies that use alternative fuels (n=58) use gasoline (43%) while 15% did not know what type of fuel is used in place of diesel.² Small proportions reported using electricity, compressed natural gas, renewable natural gas, propane, or ethanol.

² Q30. Which alternative fuel types to diesel does your company's fleet currently use? [Multiple responses accepted]

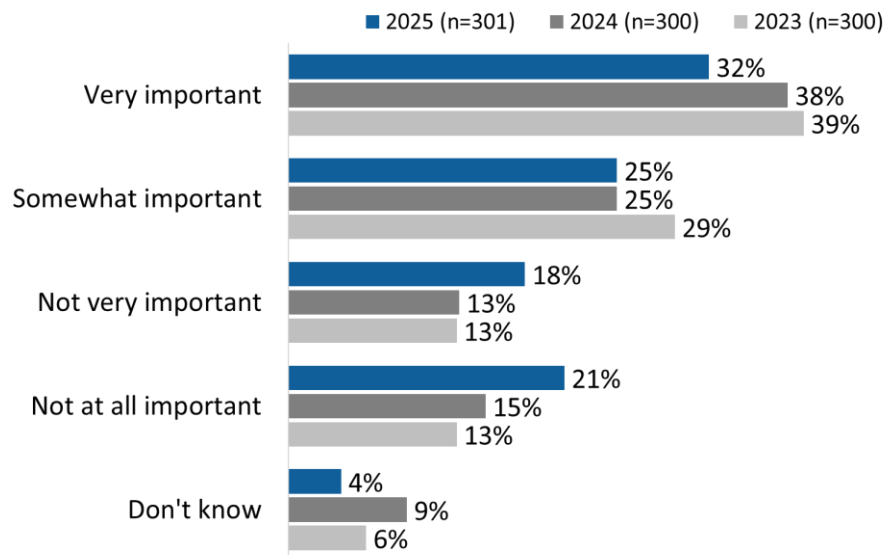
3. Government Funding Programs

This section of the report presents respondents' views of government funding and awareness and use of government green transportation programs.

Majority believe government funding for retrofits are an important investment.

Almost six in 10 freight transportation representatives said government funding programs that support fleet retrofits are important, with 25% saying somewhat important and 32% very important. Conversely, four in 10 consider government funding programs to be not very (18%) or not at all (21%) important. The perceived importance of government funding programs for fleet retrofits has declined over time, from 68% who said these programs are somewhat or very important in 2023 to 63% in 2024 and further to 57% in 2025.

Figure 12: Government funding for retrofits



Q7. In your view, how important, if at all, are government funding programs that support fleet retrofits? Base: All respondents.

Companies with fewer than five employees are less likely than larger companies to attribute importance to government funding programs that support fleet retrofits (45% of companies with fewer than five employees, compared to 61% of companies with five to 99 employees and 69% of companies with 100+ employees). This finding is based on responses to Question 7, analyzed by responses to Question 5 (Company size).

Two-thirds of survey respondents are familiar with at least one federal green transportation program.

All surveyed freight transportation representatives were asked how familiar they are with the following federal green transportation programs, using a scale of 1 to 5 where '1' is not at all familiar and '5' is very familiar:

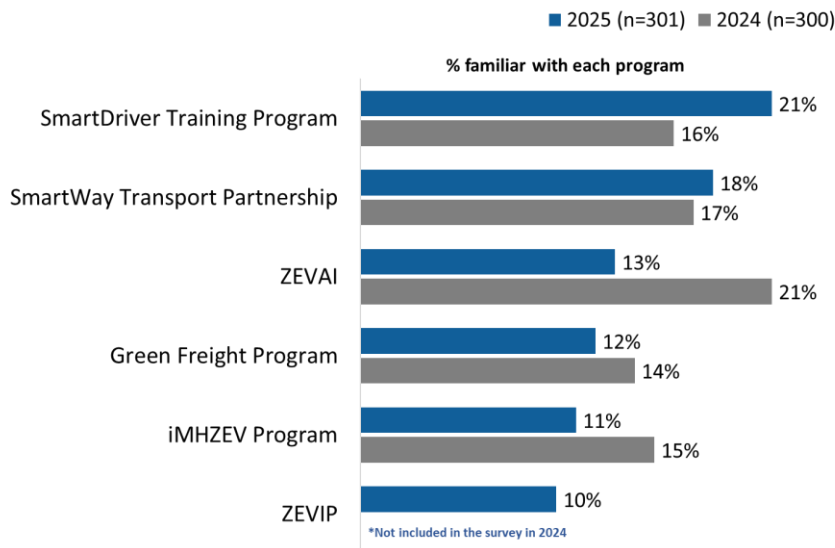
- SmartDriver Training Program

- SmartWay Transport Partnership
- Green Freight Program
- Incentives for Medium- and Heavy-Duty Zero-Emission Vehicles Program (iMHZEV)
- Zero Emission Vehicle Awareness Initiative (ZEVAI)
- Zero Emission Vehicle Infrastructure Program (ZEVIP)

Familiarity with specific programs is relatively low, ranging from 10% who are familiar with the ZEVIP to 21% who are familiar with the SmartDriver Training Program. However, when taken together, just over two-thirds (68%) of respondents are familiar with at least one of the six federal green transportation programs.

Overall, familiarity with these programs is growing, from 36% in 2022 to 57% in 2024 and 68% this year.³ At the program level, though, the year over year differences are not significant, with the exception of the ZEVAI, where the percentage of freight representatives saying they are familiar with the initiative has declined (21% in 2024 versus 13% in 2025).

Figure 13: Familiarity with federal green transportation programs



Q8. How familiar are you with the following federal green transportation programs? [Multiple responses accepted] Base: n=301; all respondents.

Consistent with 2024, familiarity with at least one of these programs is higher in Quebec (77%) than in the West (59%) and among respondents from larger companies (76% of companies with 50 to 99 employees and 86% of companies with 100+ employees, compared to 56% of companies with fewer than five employees). These findings are based on responses to Question 8, analyzed by responses to Question 4 (Company headquarters) and Question 5 (Company size).

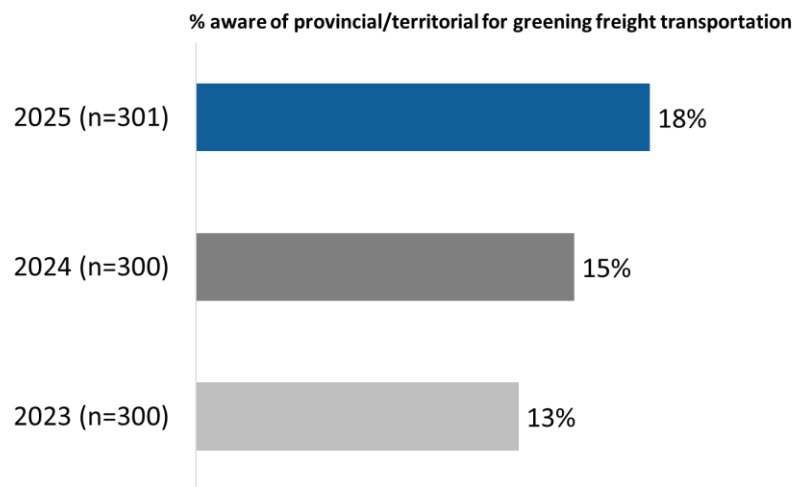
³ The number of programs asked about has increased each year, from four in 2022 to five in 2024 to six in 2025, so year-over-year comparisons should be viewed with some caution.

Low awareness of provincial/territorial greening freight programs.

Awareness of provincial and territorial programs for greening freight transportation remains low, similar to federal programs. Eighteen percent of the freight transportation companies surveyed are aware of these programs, while the majority (82%) are not. Awareness of the provincial and territorial rebate programs is unchanged year over year. However, not all provinces and territories have greening freight programs, which may partly explain the low awareness.

Before responding to the question, respondents were reminded that green transportation programs typically focus on things like improving fuel efficiency, reducing greenhouse gas emissions, using cleaner fuels, supporting zero-emission vehicles, and raising awareness or offering incentives to adopt these practices.

Figure 14: Awareness of provincial/territorial programs for greening freight transportation



Q9. Are you aware of any [provincial/territorial] programs for greening freight transportation? Base: All respondents.

Respondents from companies headquartered in Atlantic Canada (92%) and Ontario (87%) are more likely to be *unaware* of these rebate programs compared to their counterparts in Quebec (73%) and western Canada (82%). The only provinces with active green freight programs at the time of the survey were British Columbia and New Brunswick.

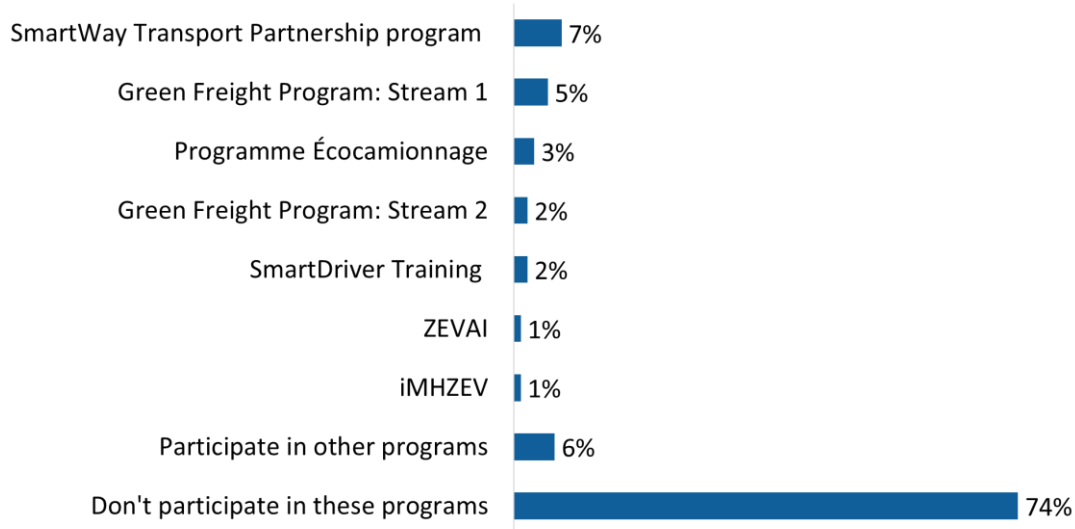
Additionally, companies with fewer than 10 employees are more likely than larger companies to be *unaware* of these programs (90% of companies with five to nine employees and 88% of companies with up to four employees versus 66% of companies that have 100+ employees).

These findings are based on responses to Question 9, analyzed by responses to Question 4 (Company headquarters) and Question 5 (Company size).

Approximately 2 in 10 companies participate in a green transportation program.

The freight representatives surveyed were asked in an open-ended manner to identify any green transportation programs that their company participates in. In response, 7% said their company participates in the SmartWay Transport Partnership program, 5% in the Green Freight Program: Stream 1 'Assess and Retrofit', and 3% in Quebec's Programme Écocardionnage⁴. All other programs were mentioned by smaller numbers and can be found listed below in figure 15.

Figure 15: Participation in green transportation programs



Q10. Which green transportation programs, if any, does your company participate in? [Multiple responses accepted].
Base: n=301; all respondents. [Don't know: 5%]

Other programs were mentioned by individual respondents and included CleanBC, Manitoba's Efficient Trucking Program, and BC Trucking Association programs. A few respondents also used this opportunity to mention devices or telematics systems installed in their company's trucks.

Companies with fewer than 10 employees are less likely to participate in green transportation programs, with non-participation rates at 97% for companies with five to nine employees and 92% for those with up to 4 employees compared to 66% for companies with 10–49 employees. This finding is based on responses to Question 10, analyzed by responses to Question 5 (Company size).

⁴ The Programme Écocardionnage stopped accepting applications in September 2024 and officially ended on March 31, 2025, according to a press release [\(source\)](#). However, some respondents still cited it when identifying green transportation programs their company participates in. Since the survey was conducted before the program's official end date, respondents may have still considered themselves participants, and some companies may not have completed their funded projects at the time of data collection.

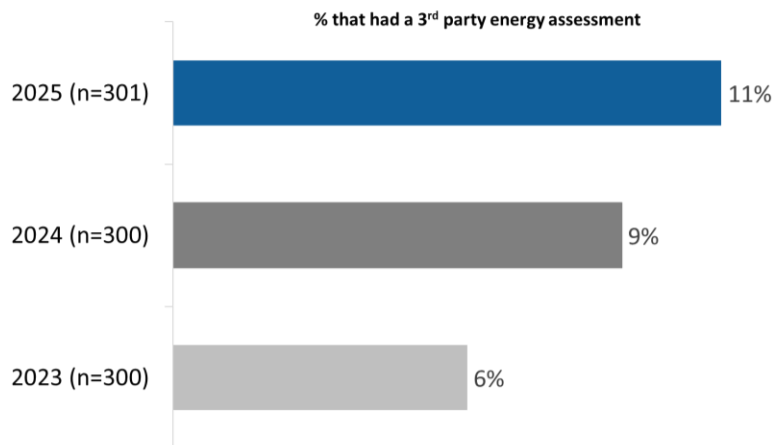
4. Fleet Energy Assessments

This section of the report discusses fleet energy assessments.

One in 10 companies have had an energy assessment.

One in 10 (11%) companies have had a third party conduct an energy assessment of their fleet (up from 6% in 2023). Before responding to the question, respondents were informed that an assessment is an analysis of their fleet's performance that can be used to help their company decide whether to invest in fuel-reducing technologies and upgrade their trucks with energy efficient devices.

Figure 16: Third party energy assessment



Q15. Has your company ever had a third party conduct an energy assessment of your fleet? Base: all respondents. [Don't know 2025: 6%]

Companies with fewer than 10 employees are less likely than larger companies to have had an energy assessment. Ninety-seven percent of companies with 5-9 employees and 93% of those with up to 4 employees had not had an assessment, compared to 50% of companies with more than 100 employees. This finding is based on responses to Question 15, analyzed by responses to Question 5 (Company size).

Among companies that have had a third party conduct an energy assessment of their fleet (n=34), most said that the assessment was important when determining retrofits should be made to the company fleet.

Lack of awareness, need, and value are the main reasons for not considering a fleet energy assessment.

Representatives of companies that have not considered a fleet energy assessment (n=267) offered a variety of reasons to explain why. Two in 10 (20%) attributed this to lack of awareness, saying they did not know about energy assessments and the benefits they offer to fleets. Following lack of awareness, the reasons most often mentioned for not considering a fleet energy assessment related to lack of need and lack of value, followed by cost. In 2023 and 2024, lack of need, value and cost were the top reasons companies would never consider having a third party conduct an energy assessment of their fleet.⁵

The full range of responses can be found in figure 17.

Figure 17: Reasons for not considering a fleet energy assessment



Q17. Would you please share the reason why your company has not considered conducting a fleet energy assessment?
[Multiple responses accepted] Base: n=267; companies that have not considered a fleet energy assessment.

⁵ In 2023 and 2024, this question was asked of respondents who said their company had not had a third party conduct an energy assessment of its fleet **and** would *never* consider having one. This year, the question was asked of those who said their company has not had an assessment of their fleet.

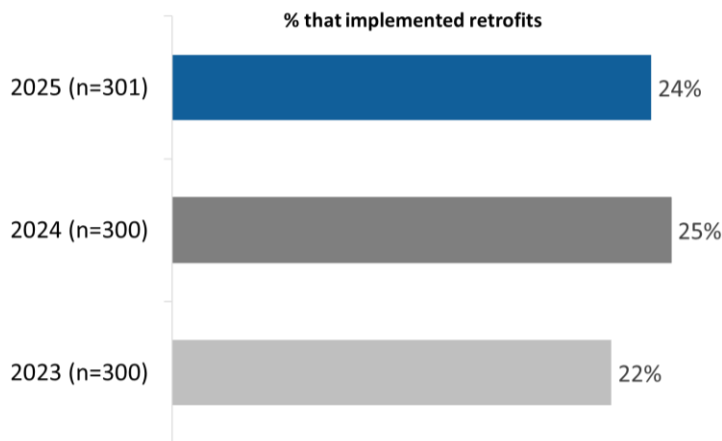
5. Retrofits

This section of the report discusses the retrofits implemented by companies in the past year. Respondents were reminded that retrofits are upgrades made to their trucks with energy efficient devices before responding to the questions in this section.

Three-quarters of companies have not implemented retrofits to their fleet.

Seventy-four percent of companies have not implemented retrofits to the trucks in their fleet in the past year. Unchanged from last year, one-quarter (24%) have implemented retrofits to their trucks.

Figure 18: Implementation of retrofits



Q18. In the past year, has your company implemented any retrofits to its truck fleet? Base: all respondents. [Don't know 2025: 2%]

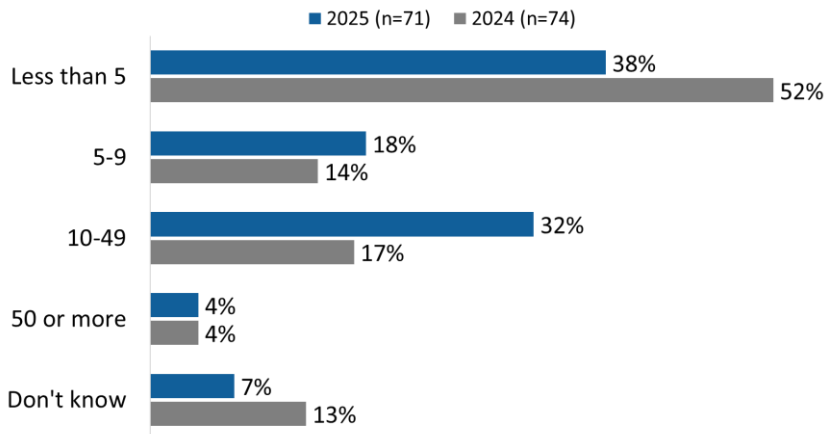
Companies based in Quebec (49%) and those with private fleets (33%) were more likely to have implemented retrofits in the past year. The likelihood of having implemented retrofits also was higher among companies familiar with federal green transportation programs (29%), those aware of provincial or territorial programs for greening freight transportation (37%), and those that have participated in a green transportation program. These findings are based on responses to Question 18, analyzed by responses to Question 4 (Company headquarters), Question 25 (Type of fleet), Question 8 (Familiarity with green transportation programs), Question 9 (Awareness of Provincial and Territorial programs), and Question 10 (Participation in green transportation programs).

The rest of the questions in this section of the report were asked only of companies that retrofitted trucks last year (n=71 companies).

Just over one-third have retrofitted up to four trucks in the past year.

Among companies that have retrofitted trucks last year (n=71), just over one-third (38%) retrofitted up to four trucks, including 18% that retrofitted just one. The majority (54%) retrofitted at least five trucks, up from 35% in 2024. The number of trucks retrofitted ranged from one to 100, with a median of five, up from three in 2024.

Figure 19: Number of truck fleet retrofits in past year

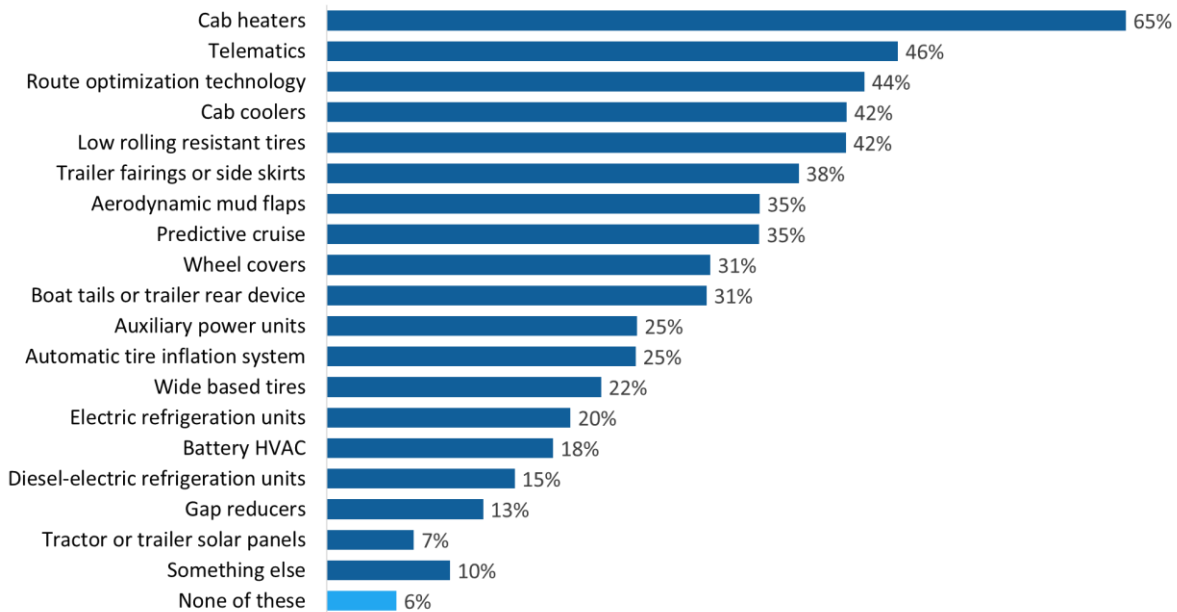


Q19. How many trucks in your company's fleet have been retrofitted in the past year? Base: companies that implemented retrofits.

For companies that implemented retrofits in 2024, cab heaters continue to be most popular.

Among companies that retrofitted trucks in 2024 (n=71), two-thirds (65%) installed cab heaters. Additionally, slightly more than four in 10 companies introduced telematics (46%), route optimization technology (44%), cab coolers (42%), and low rolling resistant tires (42%). Over one-third implemented trailer fairings or side skirts (38%), aerodynamic mud flaps (35%), and predictive cruise (35%). Figure 20 provides a full breakdown of the retrofits completed by these companies in the past year.

Figure 20: Type of retrofits



Q20. Which of the following retrofits has your company completed in the past year? Base: n=71; companies that implemented retrofits. [Don't know: 1%]

The table below shows the retrofits reported by companies for the past three surveys as well as the survey sample size for this question each year. Cab heaters continue to be the retrofit introduced by the largest proportion of companies.

Figure 21: Type of retrofits (over time)

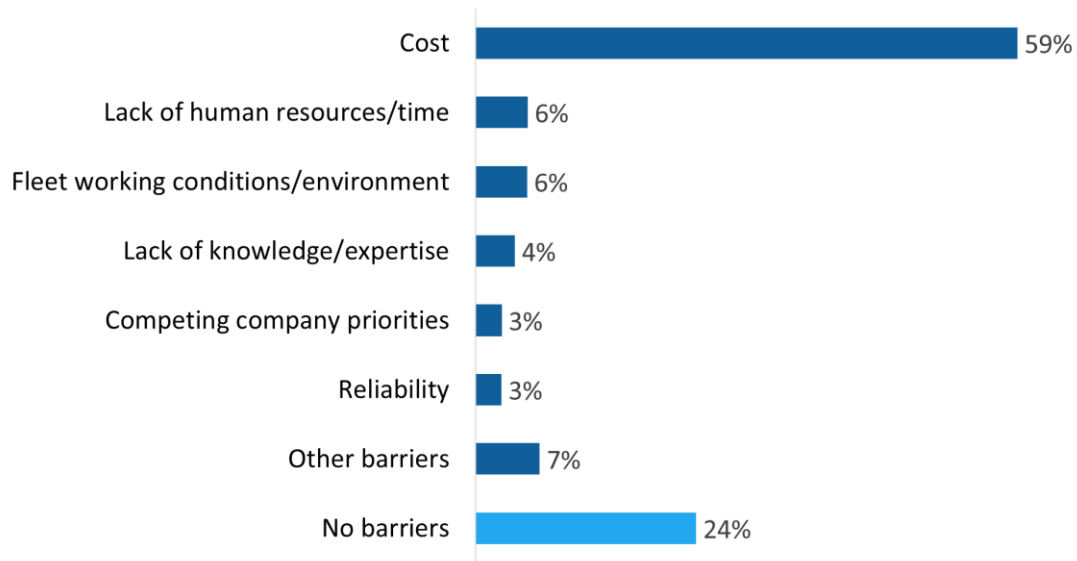
Type of Retrofit	2025 (n=71)	2024 (n=74)
Cab heaters	65%	58%
Telematics	46%	26%
Route optimization technology	44%	33%
Cab coolers	42%	44%
Low rolling resistant tires	42%	35%
Trailer fairings or side skirts ('side skirts' in 2024)	38%	23%
Aerodynamic mud flaps	35%	31%
Predictive cruise	35%	41%
Wheel covers	31%	23%
Boat tails or trailer rear device ('boat tails' in 2024)	31%	25%
Auxiliary power units	25%	41%
Automatic tire inflation system (added in 2025)	25%	--
Wide based tires	22%	16%
Electric refrigeration units	20%	19%
Battery HVAC	18%	31%
Diesel-electric refrigeration units	15%	23%
Gap reducers	13%	11%
Tractor or trailer solar panels	7%	4%

Most companies face barriers when retrofitting their fleet.

Among companies that implemented retrofits last year (n=71), nearly three-quarters (72%) face barriers retrofitting their fleet. Over half (59%) of respondents identified cost as a barrier, up from 39% in 2024 and 29% in 2023.

Figure 22 provides a full breakdown of the barriers identified by respondents. The types of barriers grouped in the "other" category include lack of perceived benefits, the state of the Canadian economy, inaccessibility or reliability of federal government greening freight programs, the technology (i.e., it does not work properly), concerns about profitability and return on investment, and lack of fuelling infrastructure, among others.

Figure 22: Barriers to retrofitting



Q21. What barriers, if any, does your company face when it comes to retrofitting its fleet? Base: n=71; companies that implemented retrofits. [Don't know: 4%]

The table below presents the barriers mentioned by companies over the last three years. Keep in mind the smaller sample sizes (n=71 in 2025, n=74 in 2024, and n=65 in 2023).

Figure 23: Barriers to retrofitting (over time)

Type of Retrofit	2025 (n=71)	2024 (n=74)	2023 (n=65)
Cost	59%	39%	29%
Lack of human resources/time	6%	1%	3%
Fleet working conditions/environment	6%	3%	2%
Lack of knowledge/expertise	4%	2%	7%
Competing company priorities	3%	3%	1%
Reliability	3%	1%	4%
Don't know	4%	25%	14%
No barriers	24%	23%	37%

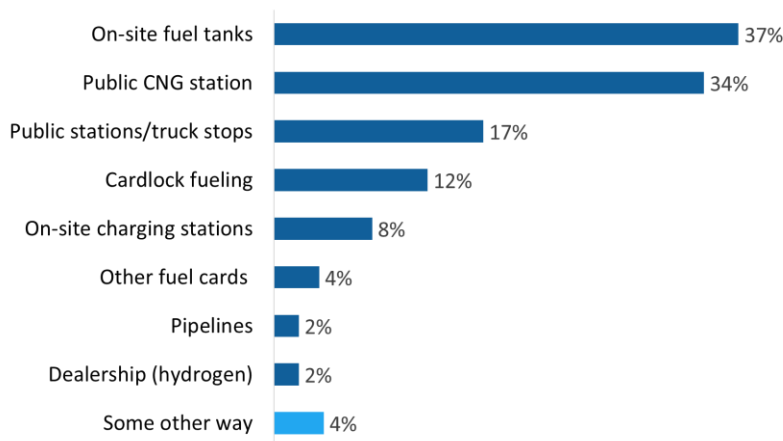
6. Refuelling/Charging Infrastructure

This section of the report presents respondents' views and actions in relation to refuelling or charging the trucks in their fleets.

On-site fuel tanks and public CNG stations are the most common ways of refuelling or charging.

Approximately one-third of companies refuel their fleet using on-site fuel tanks in (37%) and public CNG stations (34%). Seventeen percent use public stations or truck stops, 12% cardlock stations and 8% on-site charging stations. The full range of methods can be found in figure 24. In addition to the charging and fuelling methods displayed in the figure, 4% of respondents said their company uses other methods, including off-site fuel tanks, mobile fuel stations, and fueling networks.

Figure 24: Fleet charging or fuelling methods

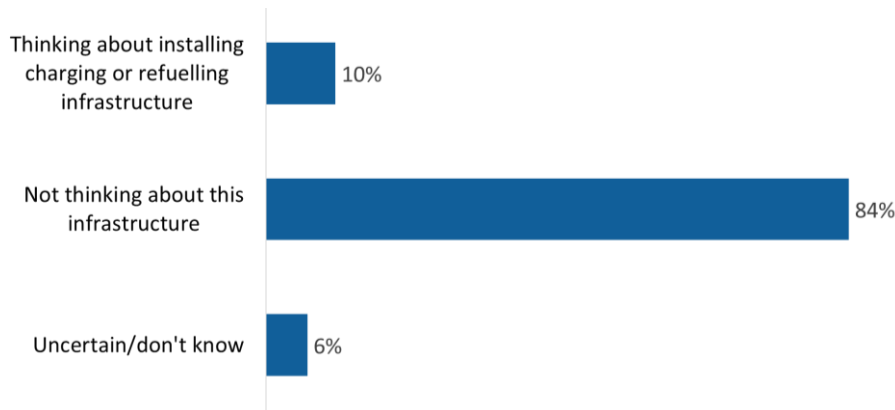


Q22. How does your company charge or refuel its fleet? [Multiple responses accepted] Base: n=301; all respondents.

Few companies are thinking about charging or refuelling infrastructure.

One in 10 (10%) freight representatives said their company is thinking about installing charging or refuelling infrastructure for zero emission trucks at their depot in the next three to five years. The majority (84%) are not.

Figure 25: Interest in charging or refuelling infrastructure



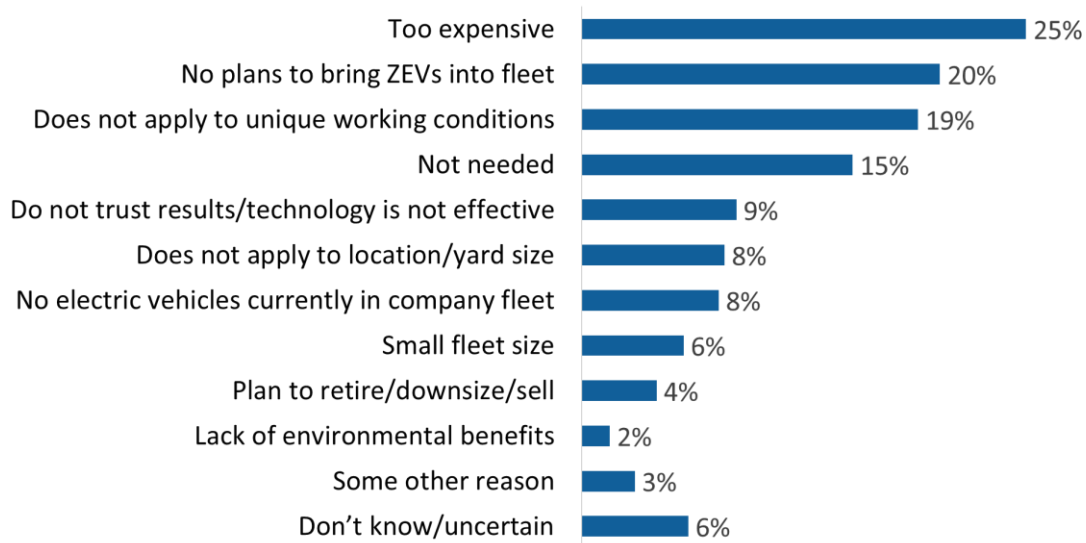
Q23. Is your company thinking about installing charging or refuelling infrastructure for zero emission trucks at its private depot in the next 3-5 years? Base: n=301; all respondents.

Lack of need, cost are the main reasons for not considering charging or refuelling infrastructure.

Freight representatives who said their company is not considering installing charging or refuelling infrastructure (n=254) were asked why. In response, the top reason offered was cost—25% said it is too expensive.

After cost, the main reason was a perceived lack of need. Companies cited no plans to add zero-emission vehicles (20%), irrelevance to their work (19%), or simply not needing the infrastructure (15%). Other reasons included charging or refuelling infrastructure not being applicable to their location or yard size, not having any electric vehicles, having a small fleet, and planning to downsize or sell the company. The full breakdown of reasons can be found in figure 26.

Figure 26: Reasons for not considering charging or refuelling infrastructure



Q24. Why isn't your company thinking about installing charging or refuelling infrastructure? [Multiple responses accepted] Base: n=254; companies not considering infrastructure.

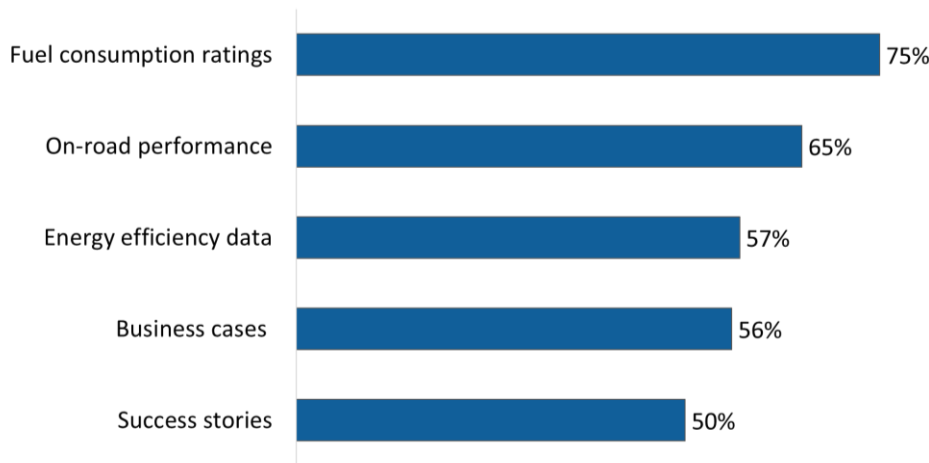
7. Communications and Fuel Efficiency Measures

A variety of different types of information viewed as useful for decision-making.

Surveyed industry representatives were asked whether different types of information would be useful for decision-making about their company's investments in fuel reducing technologies, initiatives, or programs.

Three-quarters (75%) viewed fuel consumption ratings for medium- and heavy-duty vehicles as useful for decision-making, while two-thirds (65%) viewed on-road performance of energy efficient technologies as useful. Similar proportions attributed value to data on the energy efficiency of Canada's heavy-duty fleet (57%) and business cases for adopting energy efficient technologies and practices (56%). Exactly half (50%) thought that success stories on fleets transitioning to decarbonizing operations would be useful for decision-making.

Figure 27: Information viewed as useful for decision-making



Q11. When it comes to decision-making about company investments in fuel reducing technologies, initiatives, or programs, are any of the following types of information useful? [Multiple responses accepted] Base: n=301; all respondents. [Don't know: 1 to 3%]

The table below compares the 2025 results to those of 2022 and 2024. This question was not asked of survey respondents in 2023. The proportion of companies that considered each type of information to be useful to decision-making continues to increase.

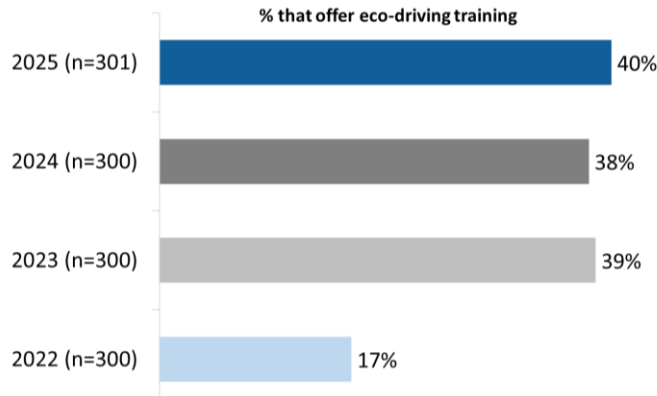
Figure 28: Information viewed as useful for decision-making (over time)

Type of Retrofit	2025 (n=301)	2024 (n=300)	2022 (n=300)
Fuel consumption ratings	75%	65%	47%
On-road performance	65%	58%	49%
Energy efficiency data	57%	46%	30%
Business cases	56%	54%	37%
Success stories	50%	46%	27%

Four in 10 companies offer eco-driving training to drivers.

A substantial minority of companies (40%) provide training designed to improve drivers' knowledge of fuel efficiency techniques. The incidence of eco-driving training is unchanged year over year, but compared to 2022, it has increased significantly. That year, only 17% of companies offered such training, whereas in 2025, the proportion has more than doubled to 40%.

Figure 29: Eco-driving training



Q12. NRCan's *SmartDriver* training series provides free, practical training to help commercial and institutional fleets lower their fuel consumption, operating costs and vehicle emissions while promoting safety. Does your company offer any training designed to improve drivers' knowledge of fuel efficiency techniques? Base: all respondents. [Don't know: 1%]
 *The wording of the question was changed slightly in 2025.

Companies with their head office in Quebec (72%), companies with fewer than five employees (73%), and those with fleets of fewer than five trucks (77%) were most likely to *not* offer eco-driving training. This finding is based on responses to Question 12, analyzed by responses to Question 4 (Company headquarters), Question 5 (Company size) and Question 27 (Fleet size).

Safety, fuel savings and maintaining competitiveness are all reasons to offer eco-driving training.

As show in figure 30, most companies that do not offer eco-driving training (n=180) would consider offering the training for reasons related to safety (78%), fuel savings (75%), and staying competitive (70%).

Figure 30: Reasons a company might consider offering eco-driving training



Q13. There are a number of reasons a company might consider offering training designed to improve drivers' knowledge of fuel efficiency techniques. I'm going to read some of these reasons to you and I'd like you to tell me if this might be a

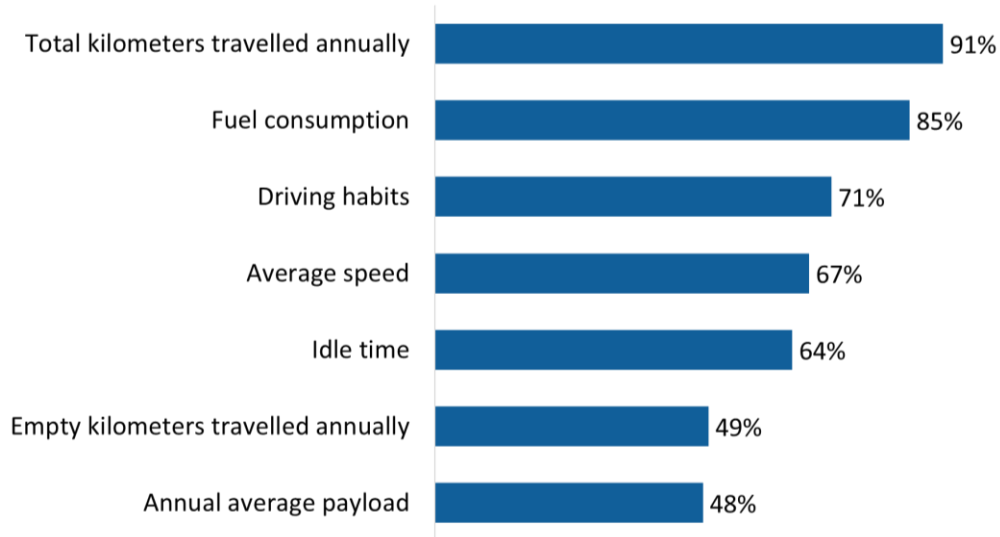
reason your company would consider training. Base: n=180; companies that do not offer eco-driving training. [Don't know: 1%]

Other reasons⁶ shared by respondents for considering driver training included cost savings (volunteered by 10% of respondents), to improve driver knowledge and training (6%), to improve general knowledge and awareness (5%), for equipment benefits (4%), and for environmental benefits (2%).

Companies tend to track metrics, such as total annual kilometers travelled, fuel consumption, and average speed.

Many of the surveyed companies track fuel efficiency metrics. The vast majority track total kilometers travelled annually (91%) and the fuel consumption (85%) of their freight trucks. In addition, seven in 10 (71%) track driving habits, while approximately two-thirds each track the average speed of their trucks (67%) and idle time (64%). Close to half track empty kilometers travelled annually (49%) and annual average payload (48%).

Figure 31: Metrics to track efficiency of fleets



Q34. Thinking about the freight trucks that your company uses, which of the following do you track? Base: n=301; all respondents.

⁶ Q14. For what other reasons, if any, would your company consider offering driver training designed to improve knowledge of fuel efficiency techniques? Base: n=180; companies that do not offer eco-driving training.

The table below compares the 2025 results to those of 2018, 2022 and 2024. This question was not asked of survey respondents in 2023. Compared to 2024, this year more companies are tracking the total kilometers travelled annually, while fewer are tracking average speed and annual average payload.

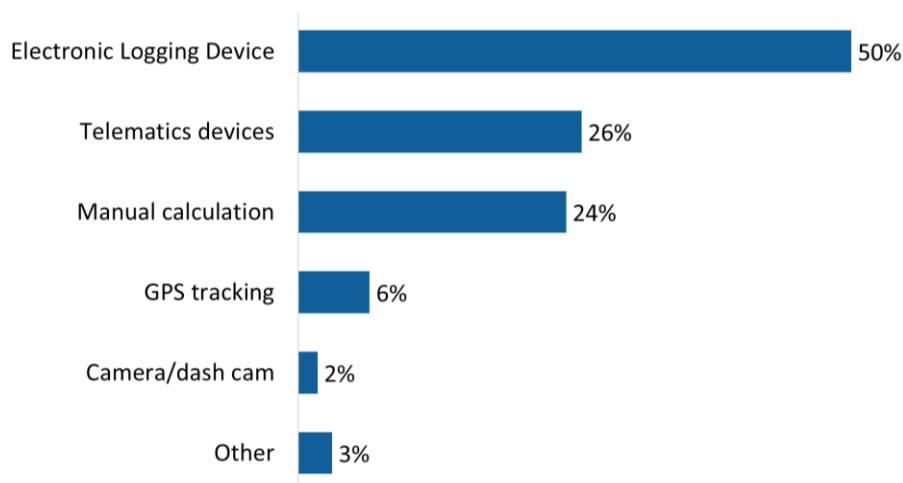
Figure 32: Metrics to track efficiency of fleets (over time)

Measures	2025 (n=301)	2024 (n=300)	2022 (n=300)	2018 (n=300)
Total kilometers travelled annually	91%	85%	89%	89%
Fuel consumption	85%	85%	90%	91%
Driving habits	71%	71%	69%	66%
Average speed	67%	75%	65%	70%
Idle time	64%	65%	63%	70%
Empty kilometers travelled annually	49%	50%	51%	58%
Annual average payload	48%	54%	52%	53%

To track efficiency metrics, half use an electronic logging device.

Representatives of companies that track efficiency metrics (n=292) were asked what methods they use to do so. Exactly half (50%) use electronic logging devices. Approximately one-quarter each use telematics devices (26%) or manual calculation (24%). The rest use GPS tracking (6%), a dash camera (2%), or another method (3%).

Figure 33: Methods to track efficiency metrics



Q35. What methods, if any, does your company use to track these things? [Multiple responses accepted] Base: n=292; companies that track efficiency metrics. [Don't know: 3%]

Appendix

1. Technical Specifications

The following specifications applied to this survey:

- A 16-minute telephone survey was administered to 301 representatives of the freight transportation industry using a computer-assisted telephone interviewing or CATI system. The titles of respondents included owner/operator (44%), operation manager (11%), general manager (10%), manager (not specified) (8%), director (7%), president/vice president (5%), and safety/compliance manager (4%). Other titles were mentioned by small numbers.
- The target respondent was individuals involved in, or knowledgeable about, the management or implementation of trucking fuel efficiency programs and policies within the business' fleet of medium and heavy-duty vehicles.
- The sample of freight transportation companies was obtained from Dun & Bradstreet Canada. The sample frame was drawn from NAICS code 4841 (General Freight Trucking)—specifically: 48411 (Local) and 48412 (Long Distance) and NAICS code 4842 (Specialized Freight [except Used Goods] Trucking Local—specifically: 484220 (Local) and 484230 (Long Distance).
- The unweighted distribution of completed surveys by NAICS code was:

NAICS code	No. of interviews
General freight: local (484110) – These companies primarily provide same-day return trucking services within a metropolitan area and its hinterland.	127
General freight: long distance (484121, 484122) – These companies primarily provide long distance, general freight trucking of complete truckloads.	155
Specialized freight trucking excluding used goods (484220, 484230) – These companies primarily provide local transportation of specialized freight (except used goods) using trucks without storage facilities.	19

- Freight transportation companies were sampled in proportion to the population by location of company headquarters. The Territories represent 0.18% of the population; in a sample of n=300, this means there are no companies from the Yukon Territory, the Northwest Territories, or Nunavut.
- The questionnaire was pre-tested in advance of the fieldwork to ensure the questions were worded properly and understood by respondents.
- Based on a sample of n=301, the overall results can be considered accurate within $\pm 6\%$, 19 times out of 20). The margins of error are higher for sub-samples. For example, 71 of 301 companies retrofitted trucks last year. A sample of size (n=71) has a margin of error of $\pm 12\%$, 19 times out of 20. This means the results for these questions are less precise than the results for questions based on the full survey sample. Broad trends can be observed, but readers should be cautious when drawing any conclusions based on the questions asked only of companies that retrofitted trucks in the last year.

- The response rate was 5%. The following table presents information about the final call dispositions for the survey and calculation of the response rate:

Total Numbers Attempted	16,047
Out-of-scope - Invalid	3,887
Unresolved (U)	8,823
No answer/answering machine	8,823
In-scope - Non-responding (IS)	2,746
Language barrier	48
Incapable of completing (ill/deceased)	99
Respondent refusal	1,879
Callback scheduled/not completed	695
Termination	25
In-scope - Responding units (R)	591
Completed interview	301
Quota reached	6
Not eligible	290
Response Rate⁷ [R=R/(U+IS+R)]	5%

- The survey data was weighted by industry against the sample frame data from Dun & Bradstreet in order to ensure the sample is representative of the population. The table below shows the unweighted and weighted proportions by NAICS code.

NAICS code	Unweighted No. of interviews	Weighted No. of interviews
General freight: local	127	130
General freight: long distance	155	156
Specialized freight trucking excluding used goods	19	15

⁷ This means that the response rate is calculated as the number of responding units [R] divided by the number of unresolved [U] numbers plus in-scope [IS] non-responding households and individuals plus responding units [R].

2. Survey Questionnaire

1st POINT OF CONTACT/GATEKEEPER:

Hello/bonjour, my name is [Interviewer's name]. Would you prefer to continue in English or French? / Préférez-vous continuer en anglais ou en français? May I speak to someone at your company who is most familiar with fuel efficiency tracking and management within your organization?

IF ASKED BY GATEKEEPER:

I'm calling on behalf of Phoenix SPI, a public opinion research company. We're conducting a survey for Natural Resources Canada, a department of the Government of Canada, about important issues facing the freight transportation industry. May I speak to the person who is most familiar with the fuel efficiency programs and policies within your company's fleet of vehicles?

- IF PERSON IS AVAILABLE, CONTINUE. GO TO RESPONDENT INTRODUCTION.
- IF NOT AVAILABLE, SCHEDULE CALL-BACK.

RESPONDENT:

Hello/Bonjour, my name is [INSERT NAME]. I'm calling on behalf of Phoenix SPI, a public opinion research company. We're conducting a survey for Natural Resources Canada, a department of the Government of Canada, with people who have knowledge about fuel efficiency tracking and management within the freight transportation industry. The results of this study will help inform future public policy to help Canadian fleets lower their fuel consumption, operating costs and vehicle emissions.

The survey takes about 15 minutes and is voluntary. Your responses will be kept confidential and anonymous, and the information provided will be administered according to the requirements of the Privacy Act, the Access to Information Act, and any other pertinent legislation.

This survey is registered with the Canadian Research Insights Council's survey validation system. May I continue?

- Yes, now [CONTINUE]
- No, call later. Specify date/time: Date: Time:
- Refused [THANK/DISCONTINUE]

INTERVIEWER NOTE: IF A RESPONDENT ASKS ABOUT THE LEGITIMACY OF THIS SURVEY, SAY: This survey is registered with the Canadian Research Insights Council's survey validation system. The registration number is 20241120-PH860.

A. Screening and Quotas

Before we start,

1. May I confirm that your company operates freight transportation trucks?
 01. Yes
 02. No [TERMINATE]
 03. Don't know [TERMINATE]

INTERVIEWER NOTE: IF ASKED WHAT FREIGHT TRANSPORTATION TRUCKS ARE, SAY: These typically include medium- and heavy-duty trucks used for moving goods and does not include vans.

2. How knowledgeable would you say you are with the fuel efficiency programs and policies within your company's fleet of vehicles? This includes the tracking of things like fuel consumption and kilometres travelled, as well as the management or implementation of such programs and policies. Are you... [READ LIST]
 04. Very knowledgeable [SKIP TO Q4]
 05. Somewhat knowledgeable [SKIP TO Q4]
 06. Not very knowledgeable [ASK Q3]
 07. Not at all knowledgeable [ASK Q3]
 08. [DO NOT READ] Prefer not to answer [TERMINATE]
3. [IF Q2=02] Can you direct me to someone at your company that is knowledgeable about the tracking, management or implementation of fuel efficiency programs and policies within your company?
 01. Yes [GO TO RESPONDENT INTRODUCTION WITH NEW PERSON]
 02. No [SAY: May I speak to your receptionist again? GO TO GATEKEEPER INTRODUCTION]
 03. No one at my company is knowledgeable about these programs [TERMINATE]
4. In which province or territory is your company's head office located? [DO NOT READ LIST]
 01. Alberta
 02. British Columbia
 03. Manitoba
 04. New Brunswick
 05. Newfoundland and Labrador
 06. Northwest Territories
 07. Nova Scotia
 08. Nunavut
 09. Ontario
 10. Prince Edward Island
 11. Quebec
 12. Saskatchewan
 13. Yukon Territory
 14. Prefer not to answer [TERMINATE]

5. How many employees work for your company? Please include part-time employees as full-time equivalents. [DO NOT READ LIST]

- 01. Less than 5
- 02. 5-9
- 03. 10-49
- 04. 50-99
- 05. 100-249
- 06. 250-499
- 07. 500 or more
- 08. Prefer not to answer [TERMINATE]

6. And, how many of these employees are employed as drivers for your company?

- 01. [NUMERIC OPEN; ACCEPTED RANGE = 1-9999]
- 02. Don't know

B. Government Programs

7. In your view, how important, if at all, are federal government funding programs that support fleet retrofits? [READ LIST] [PROVIDE DEFINITION OF RETROFITS: 'By retrofits we are referring to upgrades made to your truck(s) with energy efficient devices. This could include, but is not limited to side skirts, boat tails, wheel covers, wide based tires, low rolling resistant tires, etc.']

- 01. Not at all important
- 02. Not very important
- 03. Somewhat important
- 04. Very important
- 05. [DO NOT READ] Don't know

8. Using a scale of 1 to 5 where 1 is not at all familiar and 5 is very familiar, how familiar are you with the following federal green transportation programs? [IF ASKED, PROVIDE THIS DEFINITION OF GREEN TRANSPORTATION PROGRAMS: Green transportation programs typically focus on things like improving fuel efficiency, reducing greenhouse gas emissions, using cleaner fuels, supporting zero-emission vehicles, and raising awareness or offering incentives to adopt these practices.] [READ LIST]

[RANDOMIZE]

- a) SmartDriver Training Program
- b) SmartWay Transport Partnership
- c) Green Freight Program
- d) Incentives for Medium- and Heavy-Duty Zero-Emission Vehicles Program (iMHZEV)
- e) Zero Emission Vehicle Awareness Initiative (ZEVAI)
- f) Zero Emission Vehicle Infrastructure Program (ZEVIP)

[RESPONSE OPTIONS]

- 01. 1 Not at all familiar
- 02. 2
- 03. 3
- 04. 4
- 05. 5 Very familiar

06. [DO NOT READ] Don't know

9. Are you aware of any [INSERT BASED ON Q4: provincial / territorial] programs for greening freight transportation? [IF READ AT Q8, ADD: "Just a reminder".] Green transportation programs typically focus on things like improving fuel efficiency, reducing greenhouse gas emissions, using cleaner fuels, supporting zero-emission vehicles, and raising awareness or offering incentives to adopt these practices.

- 01. Yes
- 02. No
- 03. Don't know

10. Which green transportation programs, if any, does your company participate in? [IF NEEDED, REMIND THE RESPONDENT: Green transportation programs focus on things like improving fuel efficiency, reducing greenhouse gas emissions, using cleaner fuels, supporting zero-emission vehicles, and raising awareness or offering incentives to adopt these practices] [DO NOT READ LIST; ACCEPT MULTIPLE RESPONSES]

- 01. SmartWay Transport Partnership
- 02. SmartDriver Training
- 03. Green Freight Program: Stream 1 'Assess and Retrofit'
- 04. Green Freight Program: Stream 2 'Repower and Replace'
- 05. Incentives for Medium- and Heavy-Duty Zero-Emission Vehicles Program
- 06. Zero Emission Vehicle Awareness Initiative
- 07. None/we don't participate in any green transportation programs
- 08. Other (specify)
- 09. Don't know

11. When it comes to decision-making about company investments in fuel reducing technologies, initiatives or programs, are any of the following types of information useful? [READ LIST; PAUSE FOR A YES/NO AFTER EACH]

[RANDOMIZE]

- a) On-road performance of energy efficient technologies
- b) Fuel consumption ratings for Medium- and Heavy-Duty Vehicles
- c) Success stories on fleets transition to decarbonizing operations
- d) Business case for adopting energy efficient technologies and practices
- e) Data on the energy efficiency of Canada's heavy-duty fleet

[RESPONSE OPTIONS]

- 01. Yes
- 02. No
- 03. [DO NOT READ] Don't know

12. NRCan's *SmartDriver* training series provides free, practical training to help commercial and institutional fleets lower their fuel consumption, operating costs and vehicle emissions while promoting safety. Does your company offer any training designed to improve drivers' knowledge of fuel efficiency techniques?

- 01. Yes

- 02. No
- 03. Don't know

13. [IF Q12=02, 03] There are a number of reasons a company might consider offering training designed to improve drivers' knowledge of fuel efficiency techniques. I'm going to read some of these reasons to you and I'd like you to tell me if this might be a reason your company would consider training. The first one is [INSERT ITEM]. [READ LIST; PAUSE FOR A YES/NO AFTER EACH]

[RANDOMIZE]

- a) Fuel savings
- b) Safety
- c) Staying competitive

[RESPONSE OPTIONS]

- 01. Yes
- 02. No
- 03. [DO NOT READ] Don't know

14. [IF Q12=02, 03] For what other reasons, if any, would your company consider offering driver training designed to improve knowledge of fuel efficiency techniques?

- 01. TEXT
- 02. No other reasons
- 03. Don't know

C. Fleet Energy Assessments

Changing topics,

15. Has your company ever had a third party conduct an energy assessment of your fleet? An energy fleet assessment is an analysis of your fleet's performance that can be used to help your company decide whether to invest in fuel-reducing technologies and upgrade your truck(s) with energy efficient devices.

- 01. Yes
- 02. No [SKIP TO Q17]
- 03. Don't know [SKIP TO Q17]

16. [IF Q15=01] How important are fleet energy assessments when determining which retrofits should be made to your fleet? Retrofits are upgrades made to your truck(s) with energy efficient devices. [READ LIST]

- 01. Not at all important
- 02. Not very important
- 03. Somewhat important
- 04. Very important
- 05. [DO NOT READ] Don't know

SKIP TO Q18 UNLESS Q15=02 OR 03

17. [IF Q15=02,03] Would you please share the reason why your company has not considered conducting a fleet energy assessment? [DO NOT READ LIST; ACCEPT MULTIPLE RESPONSES]

- 01. Cost/they are too expensive
- 02. Lack of awareness/didn't know about energy assessments and the benefits they offer to fleets
- 03. Don't trust the results / do not consider the results reliable
- 04. Lack of value/it's not worth the cost, OR Do not believe there will be a return on investment in undertaking one
- 05. Don't think one is needed. PROBE: Why is that?
 - a. not planning to retrofit fleet
 - b. fleet of vehicles is less than 3 years old and is already assumed to be efficient
- 06. Lack of time to look into/meet with auditors (i.e., no in-house capacity to pursue this activity)
- 07. Lack of management buy-in
- 08. My peers in other companies, or in the trucking industry, have advised against them/they didn't find them useful
- 09. Other [specify]
- 10. Don't know

D. Retrofits

These next questions are about retrofits to your company's freight transportation trucks. Retrofits are upgrades made to your truck(s) with energy efficient devices.

18. In the past year, has your company implemented any retrofits to its truck fleet?

- 01. Yes
- 02. No [SKIP TO Q22]
- 03. Don't know [SKIP TO Q22]

19. [IF Q18=01] How many trucks in your company's fleet have been retrofitted in the past year?

- 01. [NUMERIC OPEN]
- 02. Don't know

20. [IF Q18=01] Which of the following retrofits has your company completed in the past year? [RANDOMIZE/READ LIST; ACCEPT MULTIPLE RESPONSES] [INTERVIEWER NOTE: IF ASKED, PLEASE REMIND RESPONDENTS THAT WE ARE ASKING ABOUT RETROFITS TO EXISTING TRUCKS.]

- 01. Auxiliary power units
- 02. Trailer Fairings or Side skirts
- 03. Boat tails or Trailer Rear Device
- 04. Cab heaters
- 05. Cab coolers
- 06. Aerodynamic mud flaps
- 07. Battery HVAC
- 08. Predictive cruise
- 09. Diesel-electric refrigeration units
- 10. Electric refrigeration units

11. Low rolling resistant tires
 12. Wide based tires
 13. Telematics
 14. Tractor or trailer solar panels
 15. Wheel covers
 16. Gap reducers
 17. Automatic tire inflation system
 18. Route optimization technology
 19. Other [specify]
 20. [DO NOT READ] Don't know
 21. [DO NOT READ] None of these
21. What barriers, if any, does your company face when it comes to retrofitting its fleet? [DO NOT READ LIST; ACCEPT MULTIPLE RESPONSES]
01. Cost
 02. Lack of knowledge/expertise
 03. Lack of human resources/time
 04. Competing company priorities
 05. Lack of management buy-in
 06. Other [specify]
 07. Don't know
 08. No barriers

E. Repowering and Charging/Refuelling Infrastructure

Changing topics again,

22. How does your company charge or refuel its fleet? [DO NOT READ; IF HELPFUL, PROMPT BY READING SOME ITEMS; ACCEPT MULTIPLE RESPONSES]
01. On-site fuel tanks (e.g., in the yard)
 02. On-site charging stations (e.g., in the depot)
 03. At the dealership (e.g., for hydrogen)
 04. At a public CNG station
 05. Other [Specify]
23. Is your company thinking about installing charging or refuelling infrastructure for zero emission trucks at its private depot in the next 3-5 years?
01. Yes
 02. No
 03. Don't know
24. [IF Q23=02] Why isn't your company thinking about installing charging or refuelling infrastructure? [DO NOT READ; ACCEPT MULTIPLE RESPONSES]
01. No plans to bring zero emission vehicles into company fleet
 02. Not needed. PROBE: Why is that?
 03. Too expensive

- 04. Other [Specify]
- 05. Don't know

F. Fleet Profile

These last questions are about your company's fleet.

25. Is your fleet... [READ LIST]

- 01. Private
- 02. For hire
- 03. Both
- 04. [DO NOT READ] Don't know

26. Are the trucks in your fleet... [READ LIST]

- 01. Owned
- 02. Leased
- 03. Both

27. How many trucks are in your company's fleet?

- 01. [NUMERIC OPEN; ACCEPTED RANGE = 1-9,999]
- 02. Don't know

28. How many trucks in your company's fleet are powered by diesel?

- 01. All vehicles (VALIDATE: Must be 100% of the trucks identified in Q27)
- 02. [NUMERIC OPEN; ACCEPTED RANGE = 1-9,999]
- 03. None
- 04. Don't know

29. [IF Q28 ≠ 01] How many trucks in your company's fleet are powered by an alternative fuel to diesel, for example, propane, compressed natural gas, renewable natural gas, electricity, hydrogen fuel cell, or ethanol?

- 01. All vehicles (VALIDATE: Must be 100% of the trucks identified in Q27)
- 02. [NUMERIC OPEN; ACCEPTED RANGE = 1-9,999]
- 03. None
- 04. Don't know

30. [IF Q28 ≠ 01] Which alternative fuel types to diesel does your company's fleet currently use?
[DO NOT READ; ACCEPT MULTIPLE RESPONSES]

- 01. Propane
- 02. Compressed natural gas (CNG)
- 03. Renewable natural gas (RNG)
- 04. Electricity for a battery electric truck
- 05. Hydrogen
- 06. Ethanol
- 07. Other [Specify]
- 08. Don't know

31. How many trucks in your fleet are less than five years old?
- 01. All vehicles
 - 02. [NUMERIC OPEN; ACCEPTED RANGE = 1-9,999]
 - 03. None
 - 04. Don't know
32. What type of trucks are in your company's fleet? [IF HELPFUL, PROMPT BY READING SOME ITEMS; ACCEPT MULTIPLE RESPONSES; IF A RESPONDENT MENTIONS A BRAND OF TRUCK, SAY: FOR THIS QUESTION, WE'RE INTERESTED IN THE TYPE OF TRUCK NOT THE BRAND] INTERVIEWER NOTE: IF UNCLEAR WHICH CODE TO ASSIGN THE RESPONSE, DO NOT CLARIFY WITH THE RESPONDENT. CODE THE ANSWER AS 16 AND ENTER THE RESPONSE.
- 01. Refrigerated
 - 02. Package
 - 03. Specialized
 - 04. Expedited
 - 05. Tanker
 - 06. Flatbed
 - 07. Mixed
 - 08. Dry van
 - 09. Heavy haul
 - 10. Auto-carrier
 - 11. Garbage trucks
 - 12. Cubed van
 - 13. Work truck
 - 14. Chassis
 - 15. Utility
 - 16. Other [Specify]
 - 17. Don't know
33. Are your trucks used for... [READ LIST; ACCEPT MULTIPLE RESPONSES]
- 01. Short haul [INTERVIEWER, PROVIDE DEFINITION: typically cover 160 km per day or less and return to a home terminal on a daily basis].
 - 02. Regional haul (INTERVIEWER, PROVIDE DEFINITION: the truck stays in a general geographic area, typically 500 km or less from a home terminal, and returns to that home terminal sometimes daily but no less than once per week)
 - 03. Long haul [INTERVIEWER, PROVIDE DEFINITION: typically, tractors equipped with a sleeper cab and travel distances greater than 500 km from a home terminal, often 800 – 1,000 km in a single day.
 - 04. [DO NOT READ] None of these
 - 05. [DO NOT READ] Don't know
34. Now, thinking about the freight trucks that your company uses, which of the following do you track? [READ LIST; PAUSE FOR A YES/NO AFTER EACH]
- [RANDOMIZE; ROTATE C AND D AS A BLOCK RANDOMIZING THE ORDER OF C AND D]
- a) Annual average payload

- b) Fuel consumption
- c) Total kilometers travelled annually [ROTATE AS A BLOCK WITH D]
- d) Empty kilometers travelled annually [ROTATE AS A BLOCK WITH C]
- e) Driving habits, for example, keeping steady speeds, coasting to decelerate, etc.
- f) Average speed
- g) Idle time

RESPONSE OPTIONS

- 01. Yes
- 02. No
- 03. [DO NOT READ] Don't know

35. [IF Q34=01 TO ANY ITEM] What methods, if any, does your company use to track these things like [INSERT ONE ITEM MENTIONED AT Q34]? [DO NOT READ LIST; ACCEPT MULTIPLE RESPONSES] INTERVIEWER NOTE: IF UNCLEAR WHETHER THE RESPONSE SHOULD BE CODED AS 01, 02 OR 03, DO NOT CLARIFY WITH THE RESPONDENT. CODE THE ANSWER AS 04 AND ENTER THE RESPONSE.

- 01. Telematics devices
- 02. Manual calculation
- 03. Electronic Logging Device
- 04. Other [PLEASE SPECIFY]
- 05. Don't know

Finally,

36. What's your position within the company? [DO NOT READ LIST. ACCEPT ONE RESPONSE]

- 01. Owner/operator
- 02. Operation manager
- 03. Freight manager
- 04. General manager
- 05. Administrator
- 06. Other [Specify]
- 07. Prefer not to answer

Thank you very much for your time and participation. The results of the research will be available to the general public, on the Library and Archives website, in the coming months.