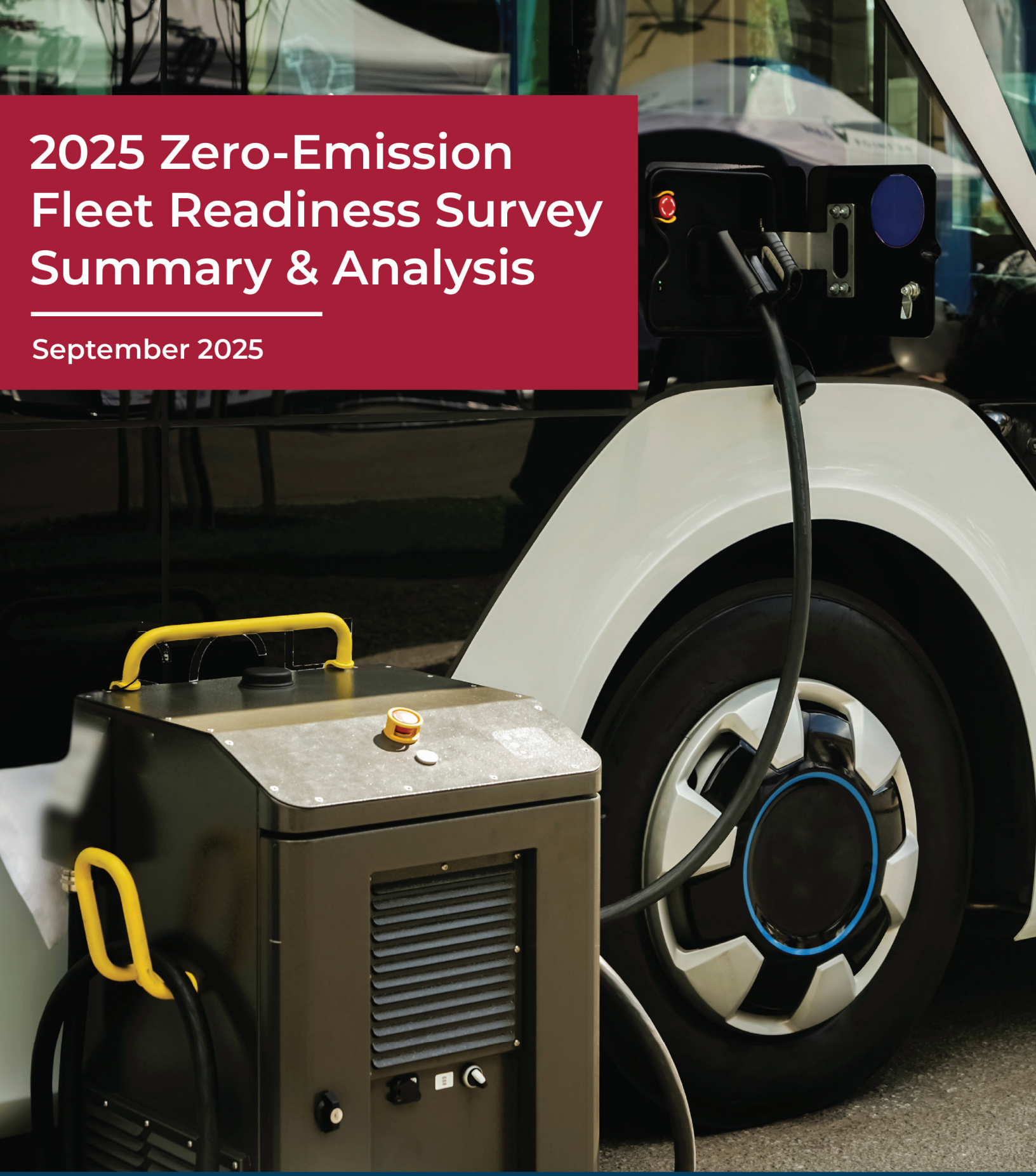
2025 Zero-Emission Fleet Readiness Survey Summary & Analysis

September 2025



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Executive Summary

Each year, CUTA conducts a survey of transit agencies to gauge their readiness to incorporate zero-emission buses into their fleets. The 2025 Zero-Emission Bus (ZEB) Readiness and Procurement Survey saw an increase in participation, with 57 transit systems responding compared to 45 in 2024. This year's survey introduced new questions to better capture technical specifications and assess the impact of evolving policy factors, including U.S. tariffs.

Key Findings

ZEB Readiness:
Although some systems shifted from initial ZEB research to either pausing or exploring alternative GHG-reduction methods, the share of systems actively planning or implementing ZEB projects increased. Notably, every region outside Ontario reported higher perceived readiness in 2025, contributing to a national readiness increase of approximately 15%.

Procurement Trends:
Planned procurement is shifting. While battery electric and hybrid vehicles remain the dominant future propulsion choices, there has been a notable short-term pivot away from battery electric buses (BEBs). BEB procurement dropped from 66% to 42% (0–3 years) and from 88% to 66% (4–6 years) between 2024 and 2025, with corresponding increases in diesel and hybrid plans. Regional patterns vary significantly, with Ontario and the Maritimes driving some of the most dramatic shifts.

Technical Specifications:
New data on infrastructure revealed consistent standards across most regions, with the exception of the western provinces (BC, Prairies, Territories), which reported higher vehicle-to-charger ratios. Most systems favor plug-in charging, mix indoor/outdoor facilities, and are investing in garage upgrades or construction.

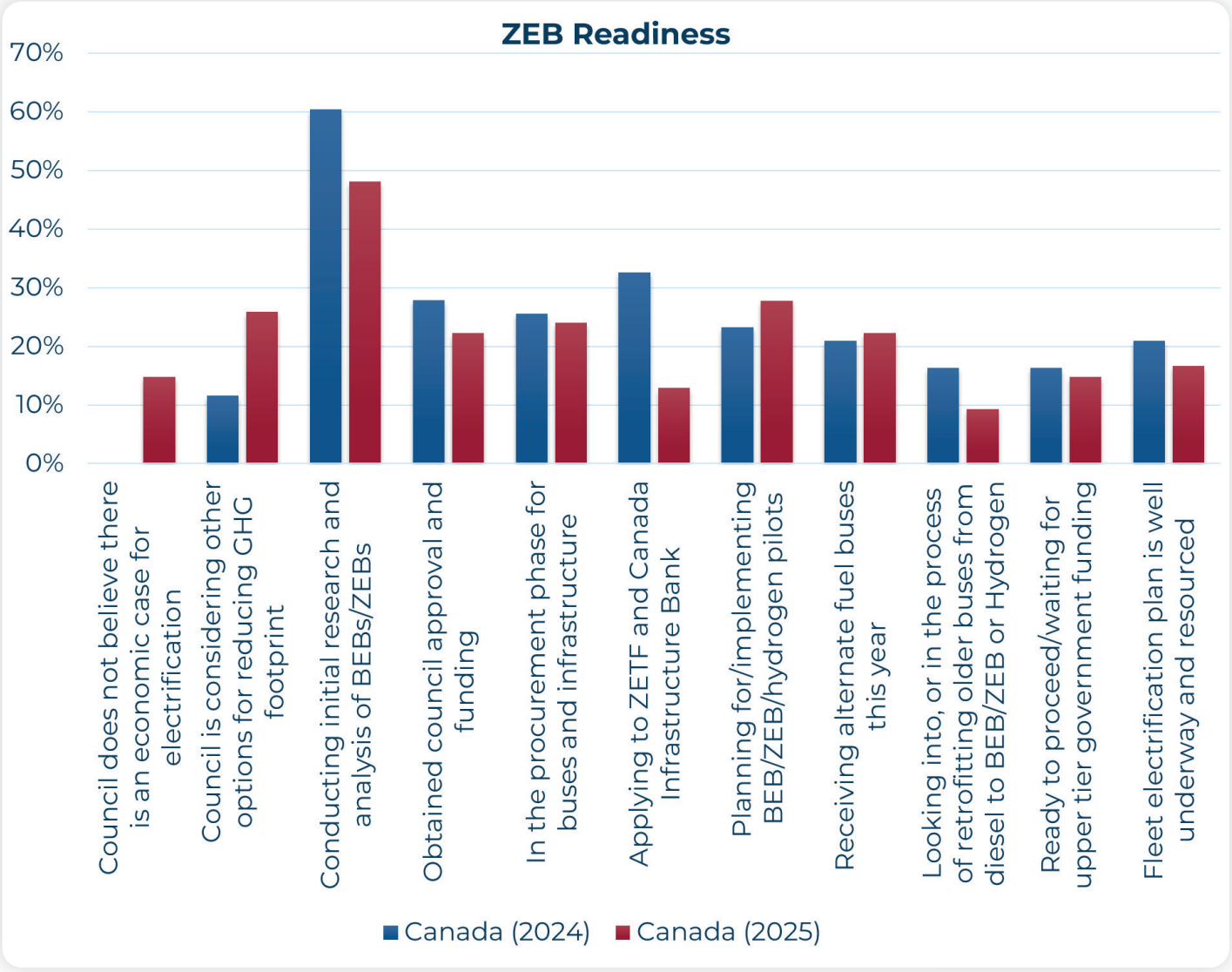
Barriers to Electrification:
Reported obstacles were more detailed than in previous years, indicating deeper planning engagement. Persistent barriers include utility coordination, infrastructure costs, and local power limitations. Most systems have now initiated discussions with their utility providers.

Federal Support:
Transit systems provided richer insights into areas where federal assistance is most needed, including funding certainty, infrastructure support, and streamlined approval processes.

Survey Respondents (and changes from 2024 survey)

With 57 respondents this year compared to 45 systems in 2024, we saw an increase in the available data. In addition, a few questions were added to help identify additional data points that may have been missed last year. The questions added were related to technical specifications related to ZEB infrastructure as well as a question related to new US tariffs.

When looking at overall responses between 2024 and 2025 data as it relates to ZEB readiness, some relevant data can be gained from the differences between the two years. It is important to note that the chart below is not directly proportional, meaning that since respondents could select however many options were applicable, so each column should be looked at either individually or in pairs as they relate to each other.

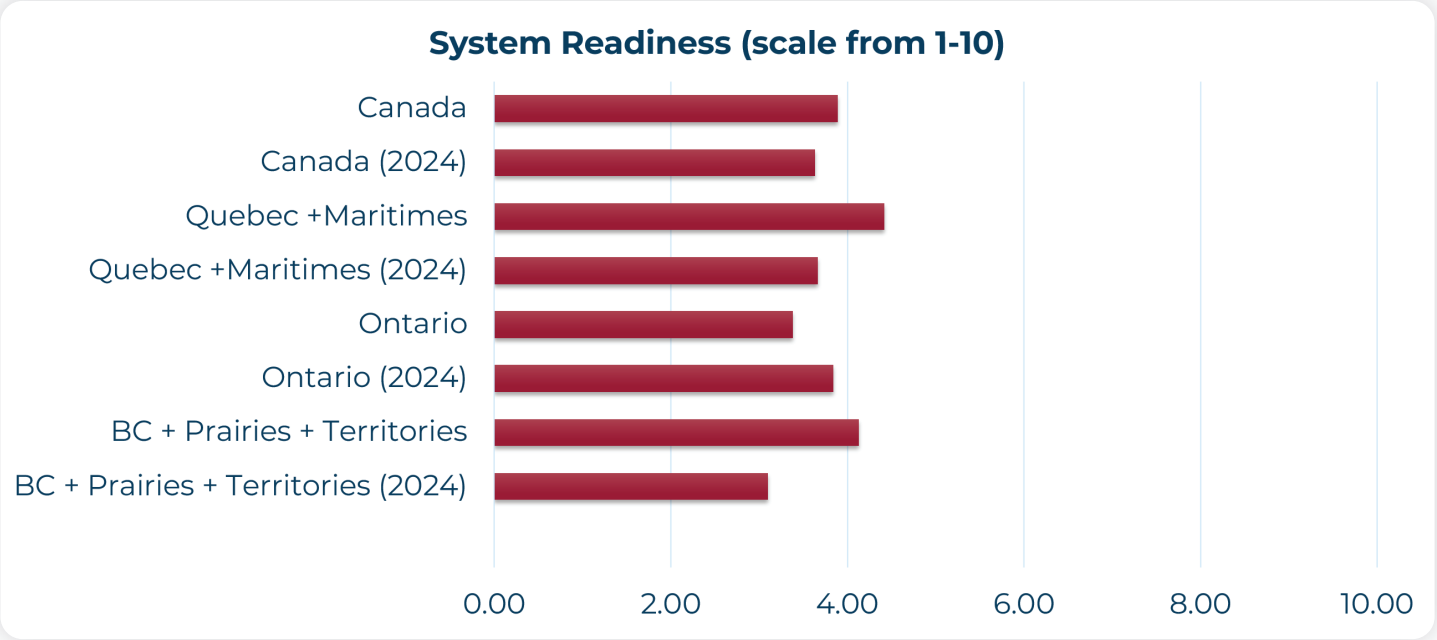


Some of the relevant pairs or sets that can be compared are the first three options: “Council does not believe there is an economic case for electrification”, “Council is considering other options for reducing GHG footprint” and “Conducting initial research and analysis of BEBs/ZEBs”.

Survey Respondents (continued)

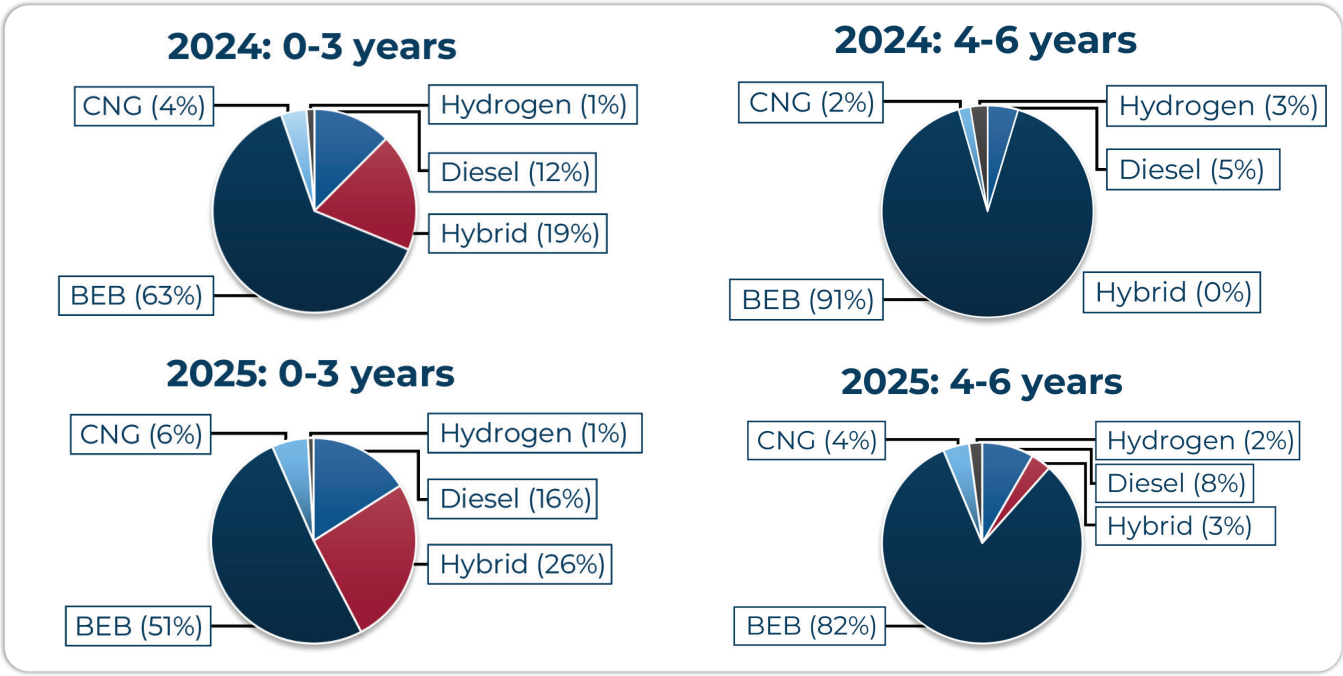
This suggests that some of the systems that were looking into initial research have determined that electrification is not feasible for their system at this time, or that there may be some additional obstacles that were not considered in the initial planning phase. This report will explore some of the issues that were raised further into the report.

It is also interesting to note the column relating to planning/implementing ZEB projects is one of the only areas that imply and increase ZEB adoption. Alongside that if we were to look at the next section in the report it would show that there is measurable progress in the ZEB market.



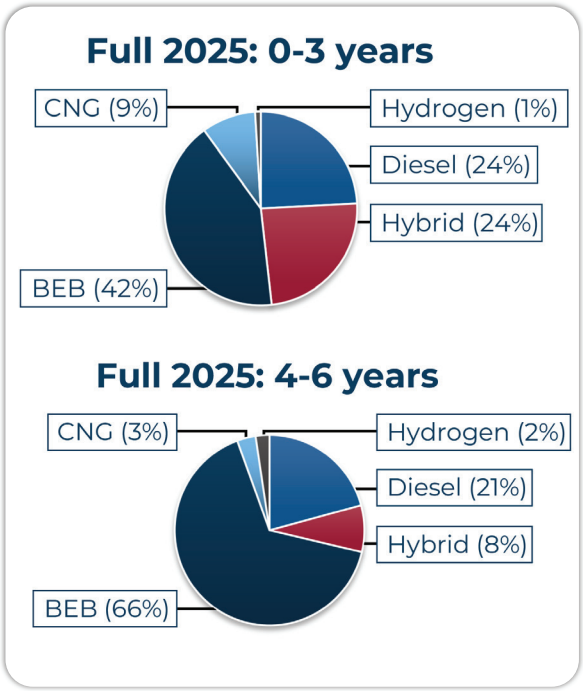
Looking at this chart, every single region outside of Ontario replied that their perceived state of readiness was higher than it was in the previous year. On a national level, there was an approximate increase of 15% in terms of reported readiness. This implies that on a national scale, systems are progressing their ZEB programs in some form or another.

Planned Procurement



The above charts show that systems are changing their procurement plans year over year and for various reasons. Note that that the question in the survey did ask for planned procurement even if funding was not yet guaranteed as the point of this survey is to try to gauge the intentions of transit systems across the country even if it had not yet been confirmed by its local governance.

The data set used in this section is only comparing the systems that responded to both the 2024 and 2025 survey and is supplemented by the general 2025 data that includes all respondents.



Overall patterns in the data show that nationwide systems are planning on shifting to Battery Electric or Hybrid vehicles in the future, but there is important nuance to this. If you look at the changes between the national 2024 and 2025 data there has been a dramatic shift away from battery electric vehicles and towards alternatives or even back to diesel. In the 0-3 year range, battery electric went from 63% of planned procurements in 2024 to only 51% in 2025 (-12% shift), and in the 4-6 year range it went from 91% in 2024 to 82% in 2025 (-9% shift). The propulsion types that gained the most from this decrease were diesel and hybrid vehicles, which saw increases of +4% and +7% in the 0-3 year range, and +3% for both in the 4-6 year range.

Planned Procurement (continued)

	Dual Respondent Data		Full 2025 Data
	2024	2025	2025
	0-3 years		
Diesel	12%	16%	24%
Hybrid	19%	26%	24%
BEB	63%	51%	42%
CNG	4%	6%	9%
Hydrogen	1%	1%	1%
	4-6 years		
Diesel	5%	8%	21%
Hybrid	0%	3%	8%
BEB	91%	82%	66%
CNG	2%	4%	3%
Hydrogen	3%	2%	2%

There are a number of other interesting data shifts in the full data set that would benefit from further study:

- Quebec and Maritimes in the 0-3 year range went from 20% hybrid and 80% battery electric in 2024 to 54% hybrid and 38% battery electric in 2025.
- Every region saw an increase in planned procurement of diesel vehicles in the 0-3 year range except for the BC + Prairies + Territories, which saw a 24% decrease.
- Much of the national increase in diesel procurement in the 4-6 year range come from the Ontario region, which saw a 16% increase in planned diesel procurement.
- Some insights can be seen in the tables, but are not present in the charts:
  - For Ontario, in the 0-3 year range, planned procurement of 60’ vehicles increased substantially (28% increase) which shifted almost entirely from the 40’ pool
  - Conversely, in the Quebec and Maritime region, there was a substantial decrease in 60’ vehicle planned procurement (25% decrease) and it was entirely shifted to 40’ vehicles.

Technical Specifications

The technical specification survey questions were new as of this year, so there is no comparison to the 2024 data. These questions were meant to try to gauge systems that have already started their ZEB journey and to ask what specifications they are building their infrastructure to.

2025 DATA					
Question	Response	Region			
		BC + Prairies + Territories	Ontario	Quebec +Maritimes	Canada
For charging your electric buses, what types of chargers do you use?	CCS (plug-in) Chargers	7	10	3	20
	Low power pantographs	0	1	1	2
	High power pantographs	2	3	0	5
In your bus depots, do you charge indoor, outdoor or both?	Indoor	6	4	1	11
	Outdoor	1	2	0	3
	Both	1	4	2	7
Do you currently have, or plan on installing on-street top ups for your vehicles?	Yes - We currently have on-street top up infrastructure in place	1	3	1	5
	Yes - We plan on installing on-street top up infrastructure in the future	1	1	1	3
	We would like to have on-street top ups, but there is no current plan for it	2	4	0	6
	No - We do not have any on-street top up infrastructure and we do not currently have plans to install it	6	5	3	14
What is your approximate vehicle to charger ratio?	What is your approximate vehicle to charger ratio? (vehicles per charger)	2.83	1.79	1.66	2.18
Do you currently have any plans to retrofit or build new garages to accommodate ZEB infrastructure?	Yes - We plan on building new garages specifically for ZEB vehicles	5	5	2	12
	Yes - We plan on retrofitting our old garages to accommodate ZEB vehicles	5	5	3	13
	We do not currently have solid plans for ZEB vehicles, but we are looking at building a new garage	0	5	0	5
	We do not currently have solid plans for ZEB vehicles, but we are looking at retrofitting our garages	0	2	1	3
	No - We currently do not have any plans on building new garages or retrofitting our current garages	3	3	0	6

Technical Specifications (Continued)

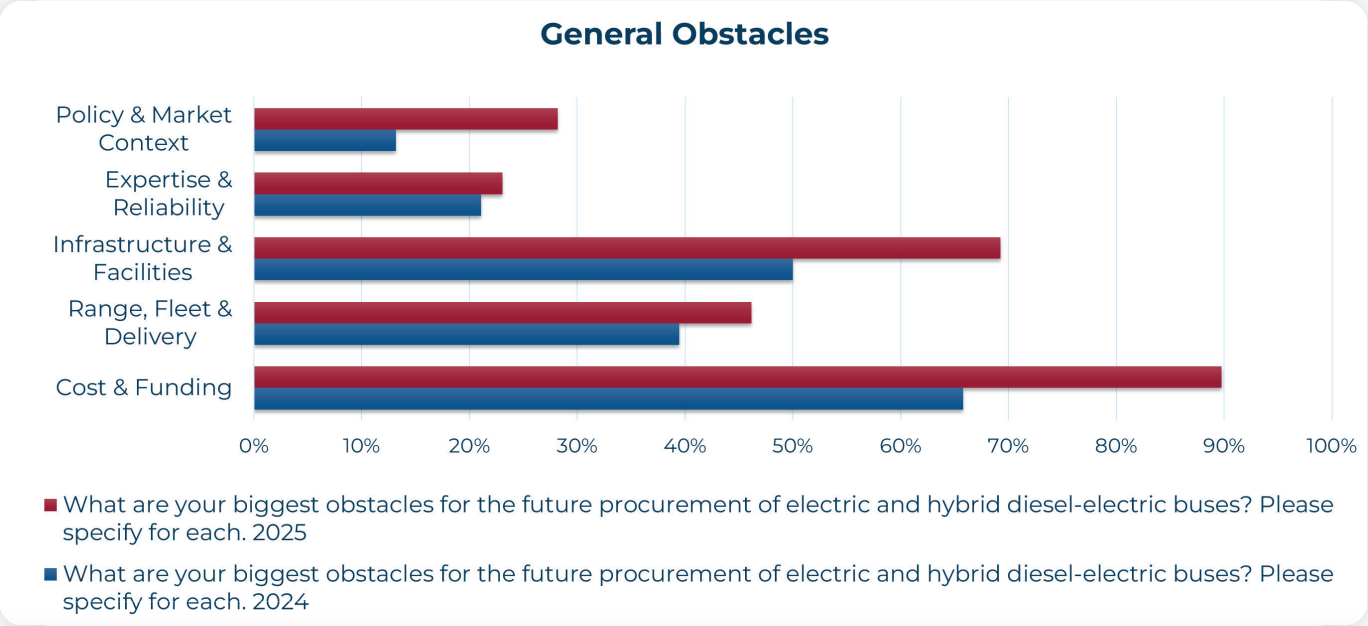
The results shown are mostly as one would expect and is largely similar across the country, with the one exception being the vehicle to charger ratios in the western regions of the country. The BC + Prairies + Territories region has, on average, over a full vehicle more per charger than the rest of the country (2.83 compared to 1.79 and 1.66). This could be the result of having a more diverse vehicle composition in terms of propulsion types compared to the eastern part of the country, or it could be a more efficient charging system that allows more vehicles to be charged simultaneously.

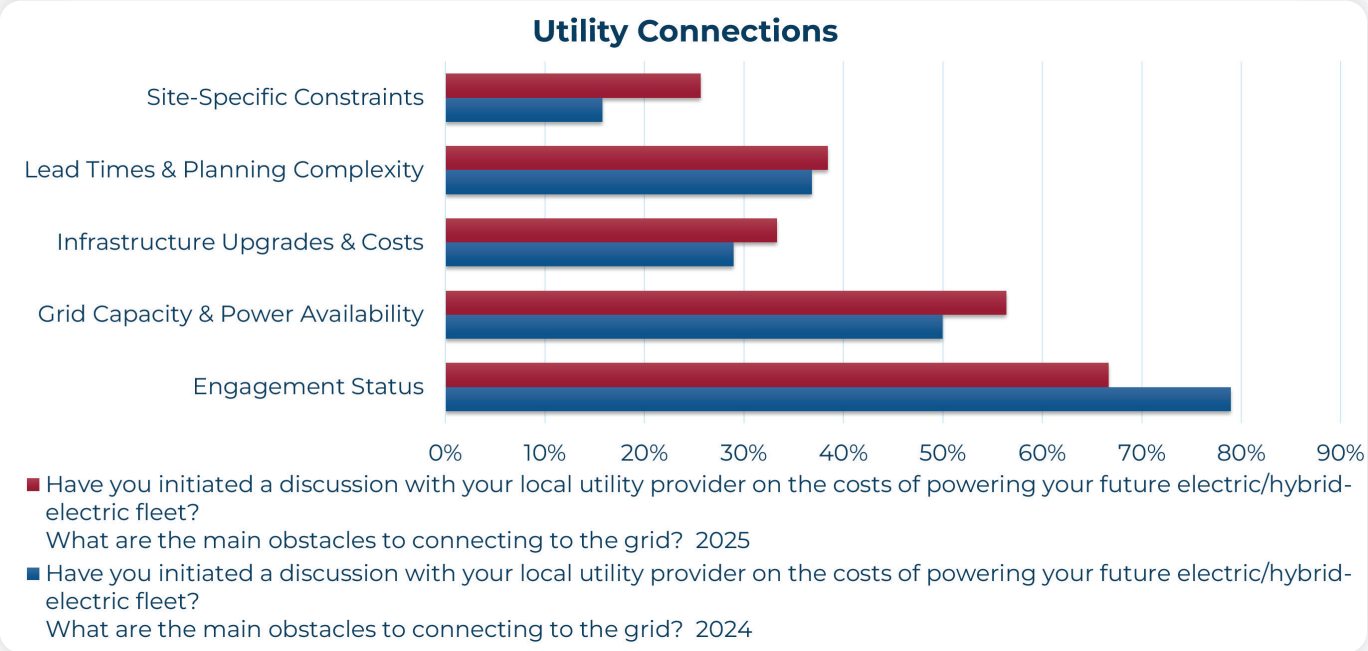
Additional trends warranting further analysis include:

- Most systems use plug-in chargers compared to low-powered pantographs or high-powered pantographs (20 – 2 – 5)
- Most systems charge their vehicles either indoors or a mix of indoors and outdoors, few only charge outdoors.
- Most systems have plans for building new garages or upgrading their existing garages to accommodate ZEB vehicles

Obstacles to Electrification

When addressing various obstacles to electrification as well as obstacles to connecting to the grid, the answers we received this year were much more detailed in thorough than answers given in the past. These detailed responses provide valuable insight as they give CUTA a better insight into the types of issues that transit systems are going through.

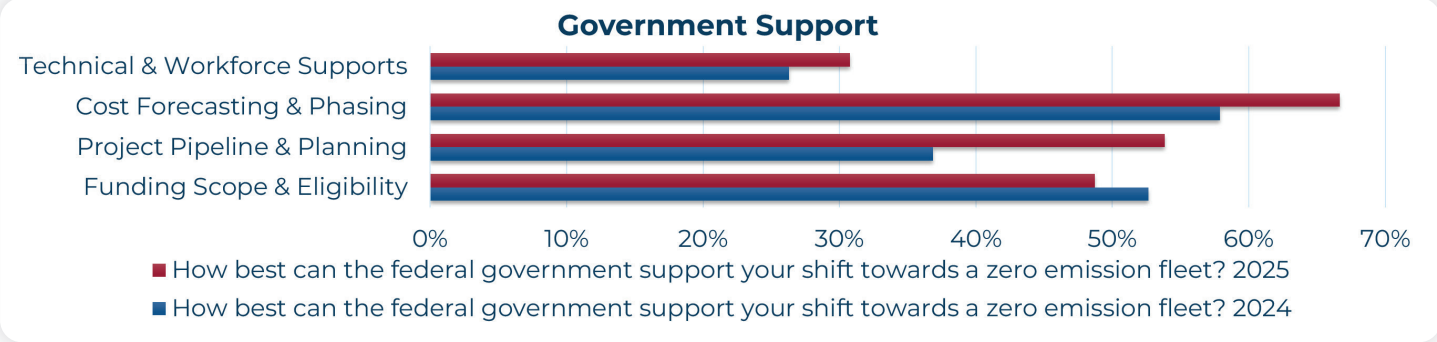




In general, the themes that were provided in 2024 are similar to those given in 2025, but the responses that were given in this year, they were much more detailed and specific. A lot of this can be attributed to advancements in the planning process at various systems, as having more systems complete their planning processes the more complicated issues arise (as seen in the chart titled “ZEB Readiness”).

Federal Government Assistance

Compared to the 2024 survey, responses in 2025 offered more detailed perspectives on the types of federal support transit systems would find most helpful as they plan or implement zero-emission bus (ZEB) transitions.



Several themes emerged across respondent feedback:

1. **Predictable and Sustained Funding**
   Many systems emphasized the value of long-term funding certainty. While the survey did not ask about specific funding programs, several respondents highlighted the importance of being able to plan over multiple years. Short-term or ad hoc funding approaches were seen as limiting the ability to coordinate infrastructure investments and procurement schedules.
2. **Support for Infrastructure and Utility Coordination**
   Respondents pointed to infrastructure costs and challenges connecting to the power grid as ongoing barriers to ZEB deployment. In this context, some systems identified a need for federal support not only for vehicle purchases, but also for charging infrastructure, garage retrofits, and utility-related upgrades. A number of agencies also noted the importance of early and collaborative discussions with utility providers, suggesting that federal assistance in facilitating or funding those efforts would be helpful.
3. **Simplified Application Processes**
   Some systems expressed that existing application and approval processes could be streamlined. Although the survey did not solicit specific examples, respondents suggested that more straightforward program structures and clearer eligibility criteria would make it easier for systems to access funding and move projects forward.
4. **Impacts of U.S. Policy Changes**
   While not a dominant theme, a few respondents commented on evolving U.S. policy, including new tariffs, as a factor affecting procurement plans. Future federal guidance or support in this area may help mitigate impacts on system budgets or timelines.

Together, these insights suggest that as more systems move from initial planning into implementation, their needs are shifting accordingly. Federal programs that provide predictable funding, address infrastructure-related costs, and reduce administrative complexity may be particularly helpful in supporting continued ZEB adoption across Canada.

Conclusion

The 2025 ZEB Readiness and Procurement Survey reveals a transit sector in transition. While national readiness for zero-emission bus deployment continues to improve, particularly outside Ontario, procurement patterns suggest a more cautious and regionally varied approach than in previous years. Short-term shifts away from battery electric buses toward hybrid and even diesel propulsion reflect practical considerations such as funding constraints, infrastructure challenges, and evolving policy environments, including new U.S. tariffs.

The addition of technical specification questions in this year's survey highlights that many systems are actively investing in infrastructure, refining their vehicle-to-charger ratios, and planning for new or upgraded facilities. These investments demonstrate meaningful progress, even where immediate procurement may be slowing.

More detailed responses across nearly every category, especially barriers to electrification and areas requiring federal support, point to greater planning maturity within agencies. As more systems move from exploration to implementation, the nature of their challenges has become more complex and specific.

Going forward, CUTA will continue to support its members by advocating for sustained and flexible federal funding, helping transit systems navigate evolving regulatory frameworks, and identifying best practices in procurement and infrastructure development. The insights gathered from this year's survey will inform CUTA's engagement with all levels of government and provide a roadmap for accelerating Canada's transition to zero-emission transit.

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CANADIAN URBAN TRANSIT ASSOCIATION
ASSOCIATION CANADIENNE DU TRANSPORT URBAIN

Head Office

Suite 1401, 55 York St.
Toronto, Ontario
Canada M5J 1R7
(416) 365 9800

Ottawa Office

Suite 200, 440 Laurier Ave. W.
Ottawa, Ontario
Canada K1R 7X6
(416) 365 9800

CUTAACTU.CA