

# Bus Manufacturing: Challenges, Insights, and Next Steps



MAR 2025





# Introduction

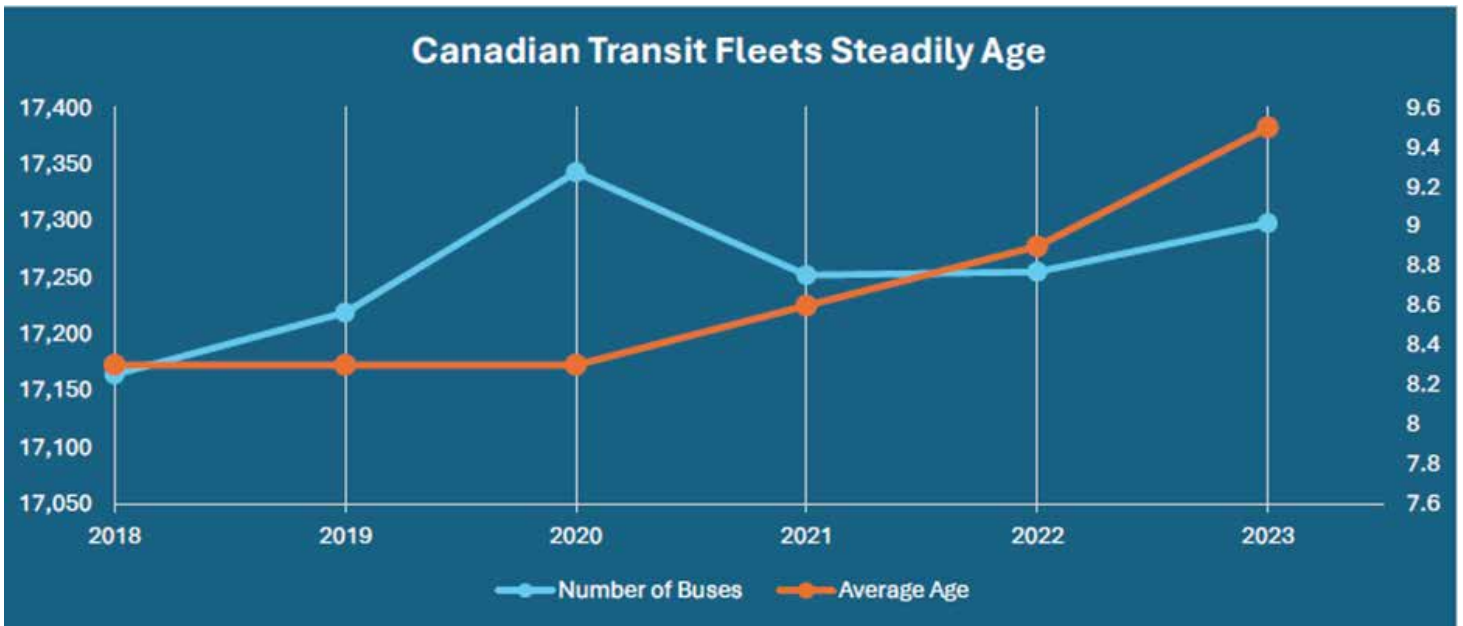
Canada's transportation sector is undergoing a significant transformation in its effort to reduce emissions. This shift is especially evident in public transit, where agencies, bus manufacturers, and regulators are working to meet ambitious federal targets while also grappling with aging fleets and rising ridership demand. The challenge is urgent and critical. This report explores the issue and outlines how CUTA is responding and leading solutions.



# Background

The pandemic severely disrupted vehicle production and delivery, causing delays in both fleet refurbishment and replacement. As a result, the average age of transit buses rose from 8.3 years in 2020 to 9.5 years in 2023. This aging trend, noted since 2021, is concerning: older fleets drive up maintenance costs and create growing backlogs for replacement.

This pattern highlights a serious and persistent challenge in the transit industry. Fleet renewal is not keeping pace with needs. Understanding the root causes – and addressing them – is essential to reversing this trend.



# ① At Issue

## #1 Fleet Needs and Climate Goals

Transit agencies are working with municipal councils and higher levels of government to reduce emissions—primarily through fleet replacement and modernization—to meet ambitious climate targets.

Zero-emission buses (ZEBs) are being procured through budgets and funding agreements that take years to plan and secure. However, these purchases now face significant cost escalations and external pressures, resulting in fewer buses being acquired than originally planned. This threatens agencies' ability to meet regular annual fleet replacement needs.

Regardless of propulsion type, transit agencies face the reality that vehicles reach the end of their lifecycle every year. At the same time, Canada's rapidly growing population is driving a sharp increase in bus ridership, meaning system capacity is effectively shrinking. The dual pressures of aging fleets and rising demand have created urgency for agencies to procure buses—of all propulsion types—to maintain and expand service.

This situation highlights the need to ensure a reliable supply of low-emission vehicles in the short to medium term. Doing so will help transit systems bridge the transition to zero-emission fleets while continuing to meet current and growing service needs.

## #2 Fast-Changing Technological Landscape

Bus manufacturers face a unique set of challenges. Emission standards in Canada—closely aligned with U.S. EPA regulations—determine which vehicle types and propulsion modes remain available or under development. Certifying new engines and motors is a complex and costly process. As a result, manufacturers must make strategic decisions about which products to offer, based on commercially viable forecasts that take into account client adoption rates, infrastructure readiness, production capacity, emerging technologies, and reliable system integration.

The anticipated shift in propulsion modes—combined with ongoing financial pressures—requires manufacturers to rationalize the variety of vehicle types and configurations on their production lines. The emergence of transformational technologies every few years disrupts the typical useful life cycle of a bus or engine, making it less appealing for clients to invest in assets that may soon require a propulsion conversion.

Similar challenges exist in the deployment of electric vehicle infrastructure. Compatibility between chargers from different manufacturers and concerns about the safety of indoor ZEB (zero-emission bus) storage remain key areas of uncertainty.



## #3 Regulators

Regulators play a crucial role in the transition to zero-emission transit. While public transit vehicles account for only a small share of overall transportation sector emissions, government interventions in this sector can be direct and impactful. The federal government, through the Zero Emission Transit Fund (ZETF), has committed to supporting the purchase of up to 5,000 zero-emission buses (ZEBs).

However, the 2024 federal budget saw a \$350 million reduction in the ZETF's funding envelope. Remaining funds are now being redistributed across multiple streams of the Canada Public Transit Fund (CPTF), which is not expected to begin disbursing funds until 2026.

This creates a growing funding gap at a time when transit systems need to initiate procurement and planning phases for their zero-emission transitions—well in advance of the CPTF rollout.

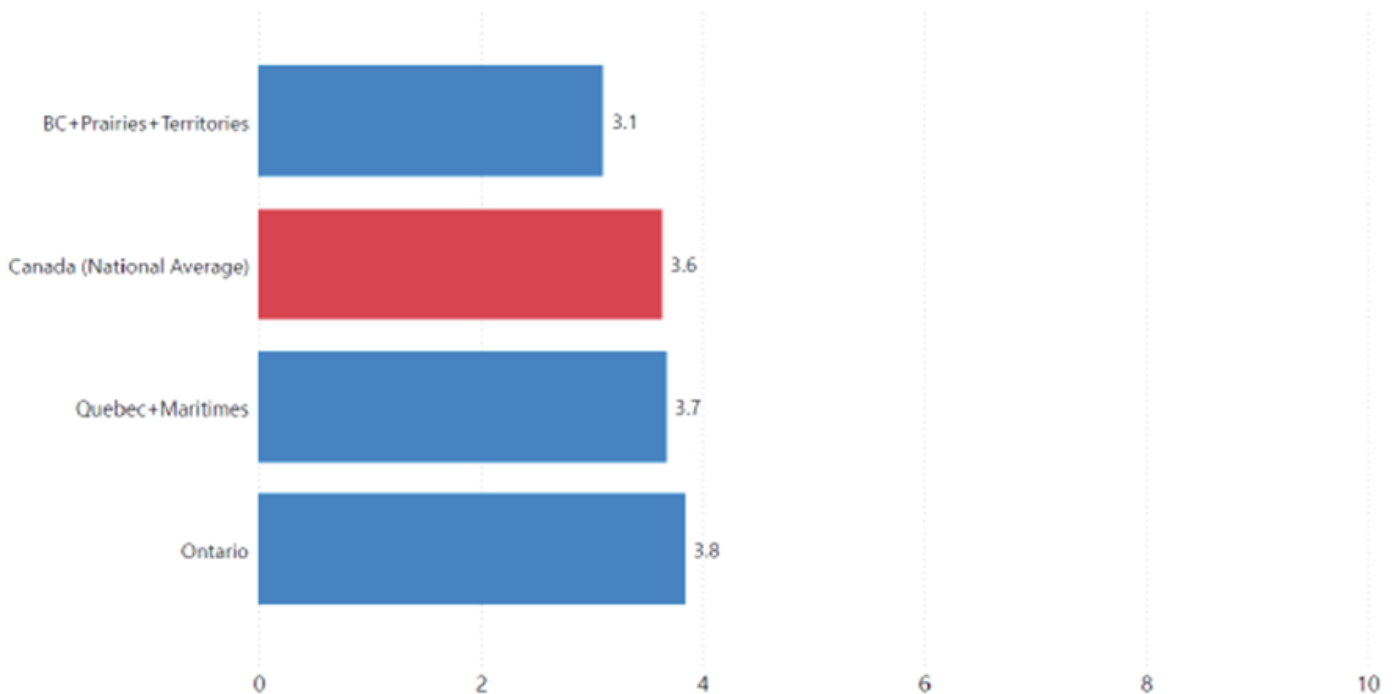
Compounding the issue are austere fiscal policies, shifting political priorities, and persistent inflation, all of which may limit regulators' ability to further support Canada's zero-emission transit goals. These challenges will be explored in more detail in future issue papers.

### Transit System Readiness

In 2024, CUTA surveyed its members to assess their readiness to transition to zero-emission fleets. By the end of 2029, respondents indicated plans to procure a total of 5,656 new buses. Despite this, most systems reported feeling unprepared for the transition, with an average readiness rating of 3.6 out of 10—where 1 indicated “not ready at all” and 10 signified “completely ready.”

#### System Readiness to Transition to Zero Emission Fleets

1 being “not at all ready” and 10 being “completely ready”



Cost was cited as a key barrier, with approximately 55% of respondents identifying it as a significant challenge in making the switch to zero-emission buses.

## Actions So Far

In 2024, CUTA heard growing concerns from transit systems about rising bus costs and procurement challenges, particularly around the ability to adequately replace aging fleets. In response, CUTA launched a fact-finding initiative with manufacturers to better understand the issues at play. As part of this effort, CUTA hosted a Town Hall with vehicle manufacturers to spotlight ongoing challenges in vehicle procurement and delivery. CUTA presented sector-wide concerns, while representatives from NFI Group, Nova Bus, and Cummins shared the difficulties they face in meeting demand.

This conversation continued at key industry events:

- A follow-up Town Hall at CUTA's Spring Summit in Halifax
- Participation in the APTA Bus Manufacturing Task Force
- A manufacturer panel co-hosted with Cummins at CUTA's Fall Conference in Toronto

Through these engagements, CUTA identified two major contributing factors to the current pressures: increasing ridership demand and a rapidly evolving technological landscape. The clear takeaway was that strong collaboration between industry and government is essential to easing procurement challenges and supporting a sustainable transition.

## Bus Manufacturing Taskforce

The transition to modern, sustainable transit fleets in Canada is at a crossroads. While there is strong policy and industry momentum behind ZEB adoption, significant barriers – financial constraints, procurement inefficiencies, supply chain risks, and regulatory hurdles – must be addressed.

CUTA established a Bus Manufacturing Taskforce that will serve as a unifying voice to push for solutions that are financially viable, operationally sustainable, and strategically aligned with industry needs. By advocating for flexible procurement models, predictable funding streams, and a stronger manufacturing sector, the Taskforce can play a pivotal role in shaping Canada's transit future.

### **Taskforce Members** *(As of March 2025)*

Chair: **Michael McDaniel**,  
Coast Mountain Bus Company

**Charlene Sharpe**, Fredericton Transit

**Christos Kritsidimas**, Nova Bus

**Dave Reage**, Halifax Regional Municipality

**Jennifer McNeill**, New Flyer

**Kelly Paleczny**, London Transit Commission

**Marc Rousseau**, EXO

**Marco D'Angelo**, CUTA

**Maureen Cosyn Heath**, Hamilton Street Railway

**Vincent Patterson**, Transportation Consultant

**Wade Coombs**, Strathcona County Transit





# Taskforce Priorities

## #1 Payments and Cash Flow challenges

Canada's bus manufacturing sector is shrinking, with only two major OEMs. This decline has led to reduced competition and increased financial strain on the industry. Rising inflation, labor shortages, and supply chain disruptions have further driven up costs, making it increasingly difficult for manufacturers to maintain financial stability. Additionally, the current procurement model requires bus manufacturers to cover costs for over 18 months before receiving payment from transit agencies, creating significant cash flow challenges. On top of this, OEMs are burdened with high interest rates, which raise borrowing costs and further exacerbate financial pressures.

## #2 Customization Challenges

Transit agencies have traditionally relied on highly customized bus specifications, which drive up costs, slow production, and create supply chain inefficiencies. This level of customization also leads to delivery delays, as unique configurations require additional time for procurement, testing, and integration. The introduction of new zero-emission bus (ZEB) technologies further complicates system integration, making customization even more challenging and expensive. Additionally, the procurement process does not promote standardization, resulting in a fragmented market with significant operational inefficiencies.

## #3 Funding Constraints

The Zero Emission Transit Fund (ZETF) is nearly fully allocated, leaving transit agencies without a clear funding source for fleet expansion. Meanwhile, the Canada Public Transit Fund (CPTF) does not begin until 2026, creating a funding gap that delays timely fleet replacements. Inflation has also driven up the cost of new buses, making previous funding allocations insufficient to meet current needs. Additionally, tariffs on imported vehicles and components further increase costs for transit agencies and restrict their procurement flexibility.



## Next Steps:

In light of this CUTA will take the following next steps to work toward addressing these priority items:

1. Engage transit agencies and manufacturers in structured consultations to refine procurement best practices.
2. Develop an industry-wide advocacy strategy to push for funding reforms.
3. Coordinate a working group on vehicle standardization to explore best approaches for reducing unnecessary customization.

CUTA encourages the transit industry to provide feedback to CUTA and to reach out to get involved in moving these key items forward.



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