

Board of Directors Meeting Highlights  
Held via Zoom  
Bluewater Recycling Association MRF  
January 16, 2025



## DHL and Volvo Collaborate to Launch Autonomous Freight Deliveries

Volvo Autonomous Solutions (VAS), the autonomous trucking division of Volvo Trucks North America, has achieved a significant milestone with the initiation of autonomous freight deliveries for real-world customers. This advancement, in collaboration with DHL Supply Chain, represents a pivotal step in the evolution of autonomous logistics.

The pilot program, launched in Texas, involves autonomous transportation of freight on a weekly basis. Initially, these deliveries will include a safety driver to monitor operations and collect critical performance data as the system is refined.

“This is a significant achievement for us,” said Sasko Cuklev, Head of On-Road Solutions at VAS, in an interview with *TruckNews.com*. “It fulfills our primary goal for the year: to begin autonomous operations with the inclusion of a safety driver.”

### Strategic Partnership with DHL

DHL Supply Chain was strategically chosen as the first fleet to integrate VAS’s autonomous VNL trucks, equipped with Aurora Driver technology, into its operations. This selection reflects a longstanding partnership and a shared commitment to advancing autonomous logistics.

“We have been collaborating closely for quite some time,” Cuklev stated. “This initiative is not solely about autonomous functionality; it is about establishing the broader ecosystem required to support its success.”

To prepare for this milestone, VAS and DHL have conducted extensive testing with traditional, human-driven trucks to gain insights into duty cycles and route characteristics. The implementation of autonomous drives represents the next phase in this collaborative effort.

### A Vision for Innovation

Jason Gillespie, Senior Director of Continuous Improvement and Innovation at DHL, emphasized the importance of working with forward-thinking partners to advance autonomous freight transportation.

“It was essential for us to identify partners among our shippers who were not only open to innovation but eager to be part of this transformative process,” Gillespie said. “We currently

have two clients actively participating in the initial launch, with more expected to join as the program evolves.”

### **Looking Ahead**

As the pilot program progresses, DHL and VAS will continue to evaluate operational efficiency, safety, and scalability, laying the groundwork for broader deployment of autonomous freight solutions. This initiative not only demonstrates the potential of autonomous trucking but also highlights the importance of collaborative ecosystems in driving innovation forward.

### **Automating Long-Haul Freight: VAS and DHL Lead the Way**

Volvo Autonomous Solutions (VAS) has unveiled an innovative model for automating long-haul freight transportation, designed to integrate seamlessly with existing logistics operations. Under this approach, traditional human-driven trucks will handle the first and last legs of deliveries, while autonomous trucks manage the long-distance routes.

### **Operational Framework**

Freight will be picked up at customer locations by human-operated trucks and transported to VAS-managed autonomous terminals. From there, autonomous trucks equipped with Aurora self-driving technology will carry the freight to another autonomous terminal. At the final terminal, traditional trucks will resume the delivery process to bring goods to their destination.

This hybrid model ensures a smooth transition into autonomous operations while leveraging human drivers’ strengths in urban and local environments.

### **A Competitive Advantage in Production**

Unlike other players in the autonomous trucking space, VAS integrates the Aurora self-driving technology directly into its trucks during assembly at Volvo’s New River Valley truck plant in Virginia. This streamlined production process enables faster scaling of operations, providing VAS with a significant edge over competitors who rely on retrofitting existing vehicles.

“This was a critical factor for us,” said Jason Gillespie, Senior Director of Continuous Improvement and Innovation at DHL. “Retrofitting can be problematic, but VAS has created a purpose-built solution that inspires confidence in its scalability and reliability.”

### **Driver Engagement and Lifestyle Improvements**

DHL has long embraced automation, implementing autonomous technologies in its warehouses and yards. Gillespie emphasized that the company’s approach is centered on enhancing human roles rather than replacing them.

“Yes, there’s some anxiety among drivers about self-driving trucks,” Gillespie admitted. “But we’re transparent in showing them that we’re not here to take jobs away. Instead, we’re targeting long-haul, cross-country freight—work that often takes drivers away from home for extended periods.”

This shift is expected to improve drivers' lifestyles by reducing time spent on the road for long-haul trips, allowing them to stay closer to home and their families.

### **Early Pilots in Texas**

Texas was strategically chosen as the testing ground for autonomous trucking due to its welcoming regulatory environment and favorable weather conditions. However, Sasko Cuklev, Head of On-Road Solutions at VAS, is optimistic about expanding the technology to regions with more challenging conditions, including Canada.

"We're confident in the evolution of this technology," Cuklev said, noting that safety remains the top priority as VAS progresses toward fully driverless operations.

### **Performance of Aurora Technology**

Gillespie expressed high praise for the Aurora Driver, highlighting its balance of caution and assertiveness. "What impresses me most is its ability to make thoughtful decisions without overreacting to challenges. It's not just about pulling over at every problem; it's about finding solutions and maintaining efficiency."

### **Efficiency and Environmental Benefits**

The transition to autonomous freight brings numerous benefits. Gillespie highlighted increased efficiency by reducing idle times—such as when trucks wait at rest stops with engines running—and the potential to streamline deliveries for long-haul routes.

"This isn't just about removing drivers from the cab," Gillespie explained. "It's about creating a system that benefits customers by cutting down transit times and enhancing operational efficiency."

### **The Road to Commercialization**

VAS plans to introduce its autonomous trucks under a Trucking-as-a-Service model, assuming full responsibility for technology setup and oversight during the early stages of deployment.

"We are a one-stop-shop," Cuklev stated. "We take on the entire process to ensure a seamless experience for our partners."

Looking ahead, VAS is open to exploring alternative deployment models based on customer feedback. "We remain humble and focused on listening to what our customers need," Cuklev added.

This strategic, phased approach ensures that the transition to autonomous freight transportation is both sustainable and beneficial for all stakeholders involved.

## Lion Electric Defaults on Debt and Seeks Creditor Protection

Lion Electric, a prominent Quebec-based manufacturer specializing in electric trucks and buses, has announced plans to seek protection from creditors under the Companies' Creditors Arrangement Act (CCAA). The decision comes amid mounting financial challenges, including a default on its debt obligations.

### Financial Struggles and Restructuring Efforts

The company is currently in negotiations with its senior lenders to secure additional funding through a new debtor-in-possession credit facility. As part of its restructuring strategy, Lion Electric intends to initiate a formal sales and investment solicitation process to identify potential paths for recovery.

In early December, the company reached an agreement to sell its Mirabel, Quebec innovation center for \$50 million. The proceeds from this sale have been allocated toward reducing its outstanding debt.

### Operational Adjustments

Lion Electric has taken significant measures to manage its financial challenges, including:

- **Temporary Workforce Reductions:** The company laid off 400 employees earlier this month.



- **Plant Shutdowns:** Production at its Illinois facility was suspended, with remaining employees focusing on bus manufacturing, sales, and delivery.

Currently, Lion Electric employs 300 staff members dedicated to maintaining its core operations.

### Market Impact

Trading in Lion Electric shares on the Toronto Stock Exchange has been halted due to the company's failure to meet exchange requirements. This move reflects the broader financial distress impacting the organization.

### Next Steps

As Lion Electric navigates this critical juncture, it remains focused on stabilizing its business and exploring viable solutions to address its debt challenges. The restructuring process aims to

preserve the company's core operations while seeking investment opportunities to support its future growth and innovation in the electric vehicle sector.

### Looming Emissions Regulations to Present Significant Costs for Fleets

The trucking industry is on the verge of facing one of its most significant regulatory shifts in years. The rollout of Model Year (MY) 2027 trucks, set to begin on January 1, 2026, is expected to bring unprecedented cost increases and operational challenges, leaving fleet managers grappling with strategic decisions.

#### Economic and Regulatory Challenges

The Canadian economy remains sluggish, compounded by looming threats of tariffs under the incoming Trump administration in the United States. These external pressures coincide with the most stringent emissions regulations to date, mandated by the U.S. Environmental Protection Agency (EPA).

Over the past 20 years, truck manufacturers have achieved more than a 90% reduction in exhaust emissions. While this represents a monumental technological achievement, the upcoming EPA27 standards aim to push these reductions even further.

#### Unprecedented Emissions Standards

The EPA27 standards include:

- **NOx Emissions:** A reduction to 0.035 grams per brake horsepower-hour.
- **Particulate Matter (PM):** A cut to 0.005 grams, marking a 90% reduction since 1998.
- **Greenhouse Gas Reductions:** Mandated decreases in methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and carbon dioxide (CO<sub>2</sub>).

These stringent requirements are expected to drive the steepest year-over-year price increases the industry has ever seen.

#### Anticipated Cost Increases

The cost of compliance will not come cheap. A new Class 8 truck for MY2027 is projected to cost \$20,000–\$30,000 more than its current counterpart, due to advanced emissions reduction technology and extended warranty requirements.

Jonathan Randall, President of Mack Trucks North America, confirmed:

“We’re in that \$20,000 range. It’s the technology, but it’s also the warranty we have to put on it. That’s a big piece of it.”

For Canadian fleets, these figures translate to approximately \$28,000 at current exchange rates, with highway tractors with sleepers likely averaging \$225,000–\$235,000 by 2025.

## Industry Concerns and Lack of Transparency

Despite the looming deadline, there is limited clarity on how OEMs plan to meet these emissions standards. While some manufacturers, such as Cummins, have been transparent about their strategies, others have remained silent. This uncertainty has left fleet owners anxious about maintenance implications and the reliability of new systems.

Bruce Stockton, COO of Wilson Logistics, expressed his concerns:

“We’re worried about the unknown. Even though Cummins has been transparent, we haven’t seen much in the way of field tests or widespread adoption of these solutions.”



## Fleet Strategies: To Pre-Buy or Not to Pre-Buy?

Many fleets are weighing the benefits of purchasing MY2026 trucks before the price increases take effect.

However, economic constraints, high interest rates, and a shaky freight market have delayed the anticipated pre-buy surge.

“We were expecting the pre-buy to really start happening in Q4 of this year, but it hasn’t,” said Randall. “It’s likely to pick up in the second half of 2025, making 2026 a capacity-constrained year.”

Fleets with newer vehicles may be better positioned to navigate the transition, while older fleets face challenges related to maintenance costs and warranty expiration.

## Diverging Industry Perspectives

While some, like XTL Transport’s COO Craig Germain, plan to maintain regular purchasing cycles, others remain skeptical about the broader industry’s readiness to absorb these costs.

“We’ll stick to our normal cycles and hope the industry is prepared to pay for the gains from an emissions perspective,” Germain said.

Steve Brookshaw, Senior Executive Vice President at TFI International, acknowledged the financial burden but emphasized the importance of environmental improvement:

“The whole environmental improvement we have to make in our industry—it’s a journey, not an event.”



### **The Tariff Factor**

Adding to the uncertainty, the incoming U.S. administration has signaled potential tariffs on goods exported from Mexico and Canada, which could further inflate truck prices and disrupt freight movements. If applied to heavy trucks, these tariffs could make an already costly situation even worse.

### **Looking Ahead**

With the MY2027 regulations less than a year away, the trucking industry faces critical decisions that will impact operations, costs, and competitiveness. Whether through pre-buy strategies or embracing the new standards, fleets must prepare for a period of significant adjustment as the regulatory landscape evolves.

### **Hyzon Motors Announces Closure Amid Financial Challenges**



Hyzon Motors, a hydrogen fuel-cell electric truck manufacturer, has announced plans to cease operations following a decision by its board of directors. The announcement marks the end of the company's efforts to establish itself in the zero-emission commercial vehicle market.

On December 20, Hyzon issued a Worker Adjustment and Retraining Notification (WARN) Act notice to regulators, citing an inability to secure the funding necessary to sustain operations.

### **Funding and Market Challenges**

The company pointed to significant funding shortfalls and uncertainty surrounding the availability of government subsidies as primary factors in its closure. In particular, delays and reduced availability of programs such as California's Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project have impacted customer purchasing decisions, causing many to postpone or cancel orders.

### **Board Recommendations and Shareholder Impacts**

In light of these challenges, Hyzon's board has recommended dissolving the company and distributing remaining assets to creditors. In a statement to stockholders, the company said: "Hyzon is unable to continue its ongoing operations with its current cash and anticipated future cash flow. Efforts to secure sufficient equity, debt, or other financing have been unsuccessful. The board believes that the Assignment [Proposal] presents the best opportunity to maximize recoveries for creditors while preserving any potential residual value for stockholders."

### **Looking Ahead**

The decision underscores the financial risks and uncertainties facing companies in the emerging clean-energy transportation sector, particularly those reliant on government subsidies and nascent market demand.

As Hyzon winds down operations, it leaves behind lessons for other players in the zero-emission vehicle space about the importance of financial resilience and the challenges of scaling in a rapidly evolving industry.

## **Battery Technology Evolves to Meet the Demands of Modern Vehicles**

As commercial trucks and software-defined vehicles become increasingly sophisticated, the low-voltage batteries that power them are undergoing a revolution. Manufacturers are making batteries smarter, lighter, more reliable, and, in some cases, more environmentally friendly and cost-effective by using alternative materials such as sodium instead of lithium.

### **Clarios: Leading the Charge in Innovation**

At the Consumer Electronics Show in Las Vegas, Federico Morales-Zimmermann, Vice President and General Manager of Global OEM Customers, Products, and Engineering at Clarios, provided insights into the future of battery technology. Clarios, a major player in the battery industry, produces batteries for one-third of all vehicles globally, including heavy-duty trucks, under its Optima brand and various white-label brands.

"Our batteries are 100% recyclable," Morales-Zimmermann noted. "We manage the entire lifecycle—from design and production to recovery—something our OEM customers highly value."



With 80% of its market comprising aftermarket sales, Clarios is well-positioned to address the evolving demands of vehicle electrification.

### A Transformative Year Ahead



Morales-Zimmermann predicts that 2025 will be a transformative year for the battery industry as customer expectations grow, driven by advances in artificial intelligence, automation, and the increasing popularity of absorbent glass mat (AGM) batteries.

“Vehicles are becoming more complex and power-hungry,” he explained. “This means batteries must evolve to become denser and more capable of supporting safety-critical systems and infotainment technologies. Clarios is taking a systems approach to ensure optimal performance.”

To address these needs, Clarios is introducing innovative products:

- **eAGM Batteries:** Designed for frequent-cycle applications, debuting in North America next year.
- **iAGM Batteries:** These intelligent batteries monitor their own health, enhancing reliability for critical systems.

### Expanding Roles for Batteries in Advanced Vehicles

Batteries are becoming integral to autonomous driving features and advanced driver assistance systems. For example, steer-by-wire technology eliminates mechanical connections between the steering wheel and the wheels, demanding highly reliable battery systems with redundancy and continuous monitoring.

Clarios is also developing a “smart” battery connected to the cloud. Using machine learning and AI, these batteries can predict failures and alert fleet managers, reducing unexpected downtime and unnecessary idling. European test fleets using this technology reported a 40%

reduction in idle time, saving approximately \$1,300 per vehicle annually while cutting CO2 emissions by 2,500 kilograms.

### **Sodium-Ion Batteries: A Sustainable Alternative**

Clarios is advancing sodium-ion battery technology, which replaces lithium-ion designs with salt-based materials that are abundant and inexpensive. This innovation could reduce costs by 15–20% while eliminating risks associated with thermal runaway events.

“We are very confident and bold about the potential of sodium-ion technology,” Morales-Zimmermann said.

### **Supercapacitors for High-Power Demands**

Clarios is also producing supercapacitors capable of delivering short bursts of high power. These lightweight components are ideal for supporting new technologies such as steer-by-wire systems and will be compatible with 12- and 48-volt architectures.

### **A Systems Approach to the Future**

“No other company offers the full range of solutions we provide,” Morales-Zimmermann emphasized. “We recognize our critical role in helping manufacturers achieve their growing power, safety, and sustainability targets. Our supercapacitors and innovative batteries are tailored to meet these increasing demands.”

Clarios’s investment in AI, automation, and sustainable materials ensures the company remains at the forefront of battery innovation, driving the evolution of power systems for the next generation of vehicles.



