



Second Conference on

CLEAN BUSES IN CANADA

May 25, 2023

InterContinental Toronto Centre, Canada

Hosted by:

Global **Mass Transit**

Sponsors so far:



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BACKGROUND

The Government of Canada is committed to deploying zero-emission buses (ZEBs) to meet its net-zero goal by 2050.

It announced plans to deploy 5,000 zero-emission transit and school buses at an investment of CAD2.75 billion during 2021-26. It further strengthened its commitment by signing a memorandum of understanding (MOU) at COP26 requiring all new medium- and heavy- duty buses to be zero-emission by 2040. As of September 2022, more than 860 ZEBs are already operating across the country.

This commitment of the federal government has been matched by dynamic action by transit agencies and operators. Transit agencies in Toronto, Montreal and British Columbia have drafted strategies to deploy 100 per cent zero-emission fleets by 2040. Firm plans have been announced by the city of Ottawa to add 446 ZEBs by 2027, by City of Calgary to introduce 259 ZEBs by 2027, by Halifax Transit to add 200 electric buses by 2028 and by Translink in Vancouver to deploy 500 electric buses by 2030.

The government's objective is also to make the country a leader in zero-emission vehicle transportation. However, technological challenges continue to impact the performance of ZEBs. These relate to power consumption, energy storage capacity, range, energy efficiency, and heating, ventilation and air conditioning. Moreover, navigating provincial and federal policies as well as funding programmes, while also adopting new bus technologies has proven to be a challenge for even large transit operators. That said, the industry is also making concerted efforts to improve technology and that coupled with the government's clear vision to transition to a cleaner fleet, ZEB deployments are expected to grow significantly in this decade.

In light of the developments and opportunities, Global Mass Transit (GMT) is organizing its second conference on **"Clean Buses in Canada"** on **May 25, 2023** at **InterContinental Toronto Centre, Canada**.

MISSION

The mission of the conference is to discuss the experience so far, best practices, challenges and plans of transit agencies, operators and local/provincial governments in deployment of a zero-emission bus (ZEB) fleet. It will also provide information on procuring, financing, operating, and maintaining clean buses and infrastructure. The conference will also highlight opportunities and technological innovations.

The conference will bring together policymakers, transit agencies, state transport departments, local government officials, OEMs, suppliers of bus components, technology providers, energy providers, charging solution suppliers and battery manufacturers, hydrogen-fueling infrastructure providers, funding agencies, consultants, researchers, and academicians.

The one-day conference will have eight sessions, panel discussions and case studies, with a wide array of international experts providing valuable insights and actionable advice. It will cover a range of clean buses and solutions. Examples will be provided for large, medium and small transit agencies. The agenda will cover the plans of cities to deploy clean fuel buses, especially zero-emission buses, in Canada. It will also highlight the latest technological developments and solutions to improve the customer experience.

The conference will also help understand the role governments, transit agencies, transport operators, manufacturers, and consultants can play in deploying zero-emission buses in a city. Besides, it will provide insights into the offerings of leading manufacturers and suppliers.

There will be a dedicated session on the experiences of leading transit authorities in the deployment of clean buses. This will provide an opportunity to learn how to deploy clean buses and charging/fueling infrastructure, mobilize funding, and manage stakeholder expectations.

Key topics to be explored

- Role of public transport in the journey to net zero in Canada
- Transitioning to zero-emission buses (ZEBs): Strategies, policies, case studies and best practices
- Current policies and standards for clean buses, electric buses, hydrogen buses
- Progress in the deployment of ZEBs
- Plans of cities, transit agencies and operators in Canada towards deployment of ZEBs
- Opportunities available for suppliers of zero-emission buses
- Key legal, organisational, technical, operational and financial issues in the adoption of clean buses
- Total cost of ownership (TCO) of zero-emission buses
- Drafting tender documents, selecting suppliers and developing contracts
- Operations and maintenance of electric buses and hydrogen-fuelled buses
- Electric bus charging infrastructure: Innovations, new technologies and infrastructure for large-scale fleets
- OEM perspective on hydrogen: Launching new technologies, reducing costs, improving efficiency and commercialising hydrogen
- Economics and business models
- Financing zero-emission buses
- Planning for, and scheduling and monitoring of clean buses
- Using data and AI for fleet management
- Integration of zero-emission fleet with new mobility (MaaS and AVs)

Event highlights

- Identify opportunities in Canada
- Build relationships during networking breaks
- Learn from case studies
- Showcase technology solutions
- Understand plans for ZEB deployments
- Meet transit agencies, operators and city governments

Conference on

Clean Buses in Canada

May 25, 2023

InterContinental Toronto Centre, Canada

Agenda updated as on May 24, 2023

Time (EST)	Session	Topics	Speakers
8:00-9:00	Registration, Tea/Coffee and Networking		
9:00-9:05	Introduction	Welcome remarks	Global Mass Transit
9:05-10:30	Session 1: Opening Keynote Session on Role of Transit in the Journey to Net-Zero	- Net-zero plans and role of sustainable transport - Role of transit agencies in journey to Net-zero - decarbonising fleets of buses, taxis, school buses, developing rail systems, and using clean energy at transit facilities - Key policy initiatives and expected outcomes - Expectations from the industry	<i>Panel discussion amongst:</i> - Sharon Fleming, Director, Calgary Transit - Steve Levene, Chief Operating Officer, Metrolinx - Ralf Nielsen, Director - Enterprise Sustainability, TransLink - Brian Reilly, Senior Director - Investments, Canada Infrastructure Bank (CIB) Moderator: Mike Palmer, Senior Program Director, Aviation Rail and Transit, Connected Communities, Parsons
		Q&A with the delegates	
10:30-11:00	Tea/Coffee and Networking Break		
11:00-11:45	Session 2: Decarbonising Transit in Canada: Emerging Trends, Policies and Outlook	- Status of ZEB adoption within Canada and CUTZEB Joint Procurement Initiative to support transit agencies seeking to adopt zero emission transit technologies by CUTRIC - Pathways to 100% ESBs in Canada and recommendations for the Federal Government; state of school bus electrification in key provinces and recommendations to accelerate ESB adoption by Équiterre	<i>Presentation by:</i> - Jessica Hanson, Project Manager - Zero Emission Bus (ZEB) Initiatives, CUTRIC - Valérie Tremblay, Advisor - Sustainable Mobility, Équiterre Moderator: Abbas Khayyam, Director Facilities and Rail Infrastructure - Canada, Parsons
		Q&A with the delegates	
11:45-13:00	Session 3: Electrification of Bus Fleet: Infrastructure and Technologies	- Challenges and strategies to accelerate clean bus adoption: depot automation, shared charging, micro grids, and Charging as a Service (CaaS) by ABB E-mobility - An OEM perspective on electric bus innovations by Nova Bus - Addressing the obstacles in EV charging infrastructure deployment with the Exro Coil Driver™: introducing a new class of power electronics; enabling AC fast charging capability with advances in AC charging infrastructure; reducing the CAPEX and OPEX costs by Exro Technologies - The power of collaboration - ensuring success in transit fleet electrification by PowerOn Energy Solutions	<i>Presentations by:</i> - Javier Landaeta-Bracamonte, Business Development Manager, ABB E-mobility - Robert Létourneau, Vice President, Product Development, Nova Bus - Sue Ozdemir, CEO, Exro Technologies - Keegan Tully, Managing Director, PowerOn Energy Solutions Moderator: Maya Caron, Climate and Transport Leader, Deloitte
		Q&A with the delegates	

13:00-14:00	Lunch and Networking		
14:00-15:15	Session 4: Potential of Hydrogen Buses and Infrastructure	- Fueling station for hydrogen buses and its operation: Advantages of hydrogen fueling stations and comparison; Linde global fueling stations; criteria for the success of hydrogen mobility by Linde Engineering Americas - Why Winnipeg Transit is considering hydrogen buses in its transition to zero emission buses program: challenges of scaling up a hydrogen fleet; lessons learned from developing a hydrogen fueling station with on-site hydrogen production by Winnipeg Transit - Hydrogen bus deployments: fuel cell electric buses and hydrogen dual fuel buses; zero emission strategy and fleet conversion; hydrogen fueling station by City of Edmonton - Rising demand and potential for hydrogen buses by Canadian Hydrogen and Fuel Cell Association (CHFCA)	<i>Presentations by:</i> - Julius Bernard, Business Development and Sales, Linde Engineering Americas - Erin Cooke, Project Manager - Transition to Zero-Emission Bus Program, Winnipeg Transit - Derek Hanson, Director - Transit Fleet Maintenance, City of Edmonton - Ivette Vera-Perez, CEO, Canadian Hydrogen and Fuel Cell Association (CHFCA) Moderator: Chris Hill, Advisor, Fleet Challenge
Q&A with the delegates			
15:15-16:15	Session 5: Keynote Panel Discussion: Progress, Plans and Priorities of Transit Agencies, Operators and Governments	- Transitioning to a zero-emission bus fleet - Experience so far and lessons learned in deployment of ZEBs - Drafting a ZEB deployment strategy - Key challenges and expectations from suppliers - Future plans, investments and timelines	<i>Panel discussion amongst:</i> - Wade Coombs, Director – Transit, Strathcona County - Paul Gagnon, Head Engineer Project Bus, Société de Transport de Montréal (STM) - Scott Gillner, Manager, Transit Sustainability & Innovation, City of Brampton Moderator: Emelia Torlai, Director - Business Development, Clean Energy, US
Q&A with the delegates			
Closing Remarks and End of the Conference			

TARGET AUDIENCE

The event is expected to draw participation from CXOs, executives, managers and decision-makers from:

- Public transit authorities/agencies and operators
- Public transit operators
- Ministries and government transit departments
- City governments/municipalities
- Policymaking and regulatory bodies
- Bus OEMs and technology providers
- Infrastructure OEMs
- Suppliers of bus components
- Electric charging solution suppliers and battery manufacturers
- Energy providers
- Providers of Hydrogen Refuelling Stations Infrastructure
- Hydrogen producers and suppliers
- Fuel cell companies
- Hydrogen storage companies
- Autonomous shuttle technology providers
- Autonomous shuttle manufacturers
- Multilateral agencies
- Banks and financial institutions
- Leasing companies
- Academic institutions
- Research and development organizations
- Transit associations
- Consultants
- Environmental services organizations
- Oil & Energy Companies

KEY BENEFITS FOR PARTICIPANTS

- Gain insight into the policies, projects, funding and standards for clean buses including electric buses and hydrogen buses
- Learn about best practices in financing, procuring and deploying clean buses
- Explore strategies to resolve key legal, technical, operational and financial issues facing the deployment of clean buses
- Gain exposure to new technologies and market development strategies for clean buses
- Understand the lifecycle cost analysis for clean buses to build financially-viable business models
- Learn from transit authorities, operators, key vendors, financiers, technology providers and consultants

ABOUT THE ORGANISERS

Global Mass Transit is a leading provider of information and analysis on the global mass transit industry. We publish a monthly market intelligence report (**Global Mass Transit Report**), and a weekly newsletter (**Global Mass Transit Weekly**) and operate the www.globalmasstransit.net (website).

We publish multi-client **research studies and undertake custom research assignments**. Global Mass Transit tracks developments in over 100 countries across all regions to ensure reliable and actionable research. Some of our leading research reports are Global Transit Ticketing & Fare Collection Report 2021; NFC Mobile Ticketing for Transit 2021-2030; 1,000 Global Rail Projects Database; Investment and CAPEX Plans of Transit Authorities/Agencies Report 2022-2036; Global Light Rail Projects Report 2022-2036; Global Metro Projects Report 2022-2036; Mobility-as-a-Service Initiatives and Opportunities in 100 Cities Report, Asia Pacific Bus Market Outlook Report 2021-2030 and Europe Urban Bus Market Outlook Report 2022-2031.

Global Mass Transit also organises **conferences** on topical and crucial issues with focused sessions and discussions featuring speakers with vast experience and expertise in the US, **Europe**, **Asia** and the **Middle East**. Some of our past conferences include Transit Ticketing & Fare Collection APAC, Transit Ticketing & Fare Collection MENA, Clean Buses in Europe, Clean Buses in APAC, Transit State of Good Repair in the US, Rail Asset Management Europe, Rail Asset Management APAC and Wireless Communications in Mass Transit. These conferences received a strong response from speakers and delegates alike.

We have been serving over 300 clients since 2009. Our clients include leading organisations across the world such as ABB, Accenture, Access IS, Agence Métropolitaine de Transport (AMT), Apple Pay, Arriva Nederland, Auckland Transport, Aurecon, Autoritat del Transport Metropolità (ATM), Bangkok Payment Solutions Company Limited, Bombardier Transportation, Bosch GmbH, Conduent Business Solutions (France) SAS, Confederation of Passenger Transport, Confidex, Cubic Transportation Systems, DB Engineering & Consulting GmbH, DB Stadtverkehr GmbH, Datamatics Global Services, Deloitte & Touche Enterprise Risk Services, Discover Financial Services, DXC Technology, FEIG Electronic, FIME, Gemalto, a Thales Company, GFI Genfare, Giesecke & Devrient GmbH, Google Pay, GVB Amsterdam, IDOM Engineering and Consulting, Infineon Technologies, INIT GmbH, IVU Traffic Technologies AG, JCB International, Kapsch PublicTransportCom, Keolis, Korea Smart Card Company, KPMG, LG CNS, Masabi, Mastercard, Metro Ligerio Oeste S.A., Metropolitana Milanese SpA, Ministry of Transport of Czech Republic, MRT Jakarta, National Transport Authority of Ireland, New Zealand Transport Agency, NFC Forum, North Norway European Office, NXP Semiconductors, Pricewaterhouse Coopers, Provincie Gelderland, Provincie Noord-Brabant, PSI Transcom, RATP, Public Transport Neuchâtel, SamsungPay, Serco, Siemens, Singapore Land Transport Authority, SNCF, SNC-Lavalin, Sojitz Corporation, Stadtwerke Münster, Sumitomo Mitsui Card Company, Swissrail, Tallinna Linnatranspordi, Thales, Toshiba, Touch 'n Go, Transport for London (TfL), Transports Metropolitans de Barcelona, Transport Passengers Emilia-Romagna (TPER), VDV-Kernapplikations GmbH & Co. KG, Visa, Vix Technology, Wiener Linien, Wizway Mobile Ticketing, Worldline, etc.

PARTICIPANTS

Over 225 participants from more than 115 organisations registered for the virtual conference on 'Clean Buses in Canada' that took place on December 9, 2021. Some of the key organisations that attended the event: ABB Inc, AC Transit (Alameda Contra-Costa Transit District), Air Liquide, Air Products, Alectra Utilities, AlphaStruxure, Argonne National Laboratory, Arup, Association du Transport Urbain du Quebec, Atura Power, BC Transit, Brampton Transit (City of Brampton), Burns & McDonnell, Calgary Transit, California Air Resources Board, Canadian Urban Transit Association (CUTA), Canadian Urban Transit Research & Innovation Consortium (CUTRIC), Chapel Hill Transit, City of Edmonton, City of Guelph, City of Hamilton, City of Toronto, Clean Energy Fuels, Coast Mountain Bus Company, Codiak Transpo, Colorado DOT, Connecticut DOT, Concordia University, Creative Carriage, Delaware Transit Corporation, Edmonton Transit Service, Electric Mobility Solutions (EMS), EPRI, EquiCharge Solutions, EV Connect Canada, EXP, Exponent, FAAC Incorporated, Foothill Transit, G&S Budd Consulting Ltd, Gevo, GreenCoDesign, Greenlots, Halifax Regional Municipality, Halifax Transit, Heliox, Hexagon Agility, Hexagon Purus, Hitachi Energy, HTEC, Hydra Energy, Kiewit, IBI Group, Infrastructure Canada, KPMG, Krown Corporate (Krown Rust Control Systems), Left Turn Right Turn Ltd, LIFTE H2, Linde Canada, Massachusetts Bay Transportation Authority, MTB Transit Solutions, Moveo Software GmbH, Musqueam Indian Band, National Renewable Energy Laboratory, National Research Council Canada, New Flyer/MCI, Nova Bus, NRCan, OC Transpo/City of Ottawa, Port Authority of Allegheny County, Proterra Inc, PSI Transcom GmbH, Réseau de Transport de la Capitale, Ricardo Software, Runwithit Synthetics, Santa Clara Valley Transportation Authority, s2e technologies, Saskatoon Transit, SBI BioEnergy Inc, Schneider Electric Canada, Shared-Use Mobility Center, Shell Greenlots, Siemens, SNC Lavalin, Société de transport de Laval (STL), Société de transport de Montréal, Southeast Florida Clean Cities Coalition, Southwire Canada, Southwire Company LLC, SpectrumH2, St Catharines Transit Commission, Systra, Thermo King Corporation, Tidewater Renewables Ltd, TOK Group, Toronto Transit Commission, TransLink, University of Victoria, WATT Consulting Group, XL Fleet, etc.

SPONSORSHIP (limited and available on a first-come-first-served basis)

The conference will provide an excellent opportunity for organisations to showcase their products and services.

Option 1: CAD4500

15% 'early-bird' discount until March 30: CAD3825

- Speaking slot/ Presentation of 10-15mins
- Branding on all marketing collaterals/ materials
- Branding on all communication of the conference
- Branding on all event paid promotional campaigns
- Social media posts
- Table space at the venue
- 2 delegate registrations (excluding the speaker)

Exclusive Wifi Sponsor: CAD4000

15% 'early-bird' discount until March 30, full fee is CAD3400

- Named Wifi Sponsor
- Tent cards with branding (to be placed on tables for the conference)
- Branding on all marketing collaterals/ materials
- Branding on all communication of the conference
- Branding on all event paid promotional campaigns
- Verbal recognition at the sponsored event
- Social media posts
- 2 delegate registrations

Exhibitor: CAD3000

15% 'early-bird' discount until March 30: CAD2550

- Branding on all marketing collaterals/ materials
- Branding on all communication of the conference
- Branding on all event paid promotional campaigns

- Social media posts
- Table space at the venue
- 1 delegate registration

Exclusive Lanyard Sponsor: CAD5000

15% 'early-bird' discount until March 30, full fee is CAD4250

- Named Lanyard Sponsor
- Branding on all marketing collaterals/ materials
- Branding on all communication of the conference
- Branding on all event paid promotional campaigns
- Social media posts
- 2 delegate registrations
- Lanyards to be provided by company

Coffee Sponsor: CAD3000

15% 'early-bird' discount until March 30: CAD2550

- Named Coffee Sponsor
- Branding on all marketing collaterals/ materials
- Branding on all communication of the conference
- Branding on all event paid promotional campaigns
- Social media posts
- 1 delegate registration

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DELEGATE FEE

Delegates	Price before April 06, 2023	Price before April 28, 2023	Standard Fee
One Delegate	CAD 525	CAD 638	CAD 750
Two Delegates	CAD 875	CAD 1,063	CAD 1,250
Three Delegates	CAD 1,225	CAD 1,488	CAD 1,750
Four Delegates	CAD 1,575	CAD 1,913	CAD 2,250
Special Category*	CAD 250	CAD 300	CAD 350

**There is a special low fee for transit agencies, operators, government agencies, regulatory authorities, schools, academia, not-for-profit organizations and research institutions*

REGISTRATION FORM

☐ I would like to register for the conference

☐ Please send me more information

NAME/DESIGNATION _____ COMPANY _____

MAILING ADDRESS _____

PHONE _____ MOBILE _____

FAX _____ EMAIL _____

PAYMENT OPTIONS

1. Credit Card: To make payments by credit card, please visit: <https://bit.ly/3wFN8DF>

All credit card payments will be subject to standard credit card charges

2. Wire Transfer:

Beneficiary: India Infrastructure Publishing Private Limited*
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TERMS AND CONDITIONS

Payment Policy

- Full payment must be received prior to the conference in CAD.

Cancellations

- Cancellation requests received in writing 30 days before the date of the conference will be eligible for a full refund, minus a service charge/administration fee of CAD150. We regret that no refunds will be made for any cancellation requests received less than 30 days prior to the conference.
- Substitutions/Name changes are welcome at no extra charge. Please send these in writing at least two days prior to the conference.
- **Information Collected:** We collect the information you provide to us when you complete the registration form. The information includes name, company, and email address. By registering for this conference, you agree to be contacted by us with regard to other similar events or services of ours that may be of interest to you, and by the sponsor(s) of the conference for which you have registered

Disclaimer

- Global Mass Transit shall assume no liability whatsoever in case the conference is postponed or cancelled due to a fortuitous event or unforeseen occurrence that renders its organization impractical, illegal or impossible. For purpose of this clause, a fortuitous event shall include, but not be limited to: war, fire, labor strike, extreme weather or other emergency. Global Mass Transit's responsibility is limited to the return of registration fees only, and not any travel and accommodation costs.
- Please note that it may become necessary for reasons beyond the control of the organizers to make alterations to the content and timing of the program or speakers.

CONTACT US

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To register, email us at: registration@globalmasstransit.net or visit us at www.globalmasstransit.net