



Second Annual Conference on

HYDROGEN-FUELLED BUSES AND INFRASTRUCTURE IN EUROPE

February 11, 2022

9:30 - 16:30 Central European Time (CET)

Hosted by:

Global **Mass Transit**

BACKGROUND

There is definitely greater momentum in deployment of hydrogen-fuelled buses and infrastructure in Europe, than has been seen in the past.

This has been fuelled by European Commission's (EC) initiatives, programmes, policies and funding. Some of these include the recent the EU Green Deal, Sustainable and Smart Mobility Strategy, Fit for 55 Climate Package, the revised Clean Vehicles Directive, H2BusEurope scheme to deploy 1,000 hydrogen buses and infrastructure, JIVE and JIVE 2, 3Emotion, MEHRLIN, etc. Several cities such as Aberdeen, Köln, Meckenheim, Groningen, Drenthe, Versailles, Heinenoord, London, Bolzano and Aargau have undertaken pathbreaking initiatives to deploy fuel cell electric buses (FCEBs) and have relevant experience to be shared with other cities looking to move forward on this path.

The aim of these initiatives is to advance the commercialisation of FCEBs through large-scale deployments, improve commercial viability for bus operators and demonstrate a financeable demand-led business model for hydrogen refuelling stations (HRSs).

While progress has been made, some challenges still remain. These largely pertain to pricing and energy efficiency of hydrogen-fuelled buses as compared to electric buses, supply chain and infrastructure, and safety.

Some of the concerns are being alleviated by governments and some by the private sector. The revision of the Directive on Alternative Fuel Infrastructure (DAFI) aims to fill the gaps in the build-up of hydrogen infrastructure and replace the system of national plans with more efficient instruments such as binding and enforceable targets. Further, the setting up of hydrogen valley projects in Denmark, France, Germany, Spain, Sweden, the Netherlands, Norway and the United Kingdom is expected to have a positive impact on the deployment of hydrogen-fuelled buses and setting up of related supply infrastructure. The industry is also working on large-scale deployments to reduce costs such as the H2BusEurope consortium's initiatives to bring the 12-metre single-deck bus price below EUR375,000.

Going forward, the use of hydrogen as a fuel is expected to play a critical role in Europe being able to achieve 55 per cent net emission reductions by 2030 (compared to 1990) and net zero by 2050 as FCEBs have almost no local emissions in terms of exhaust gas. There are other benefits as well such as reduced operating noise, ability to operate for long distances and elimination of range anxiety, and short refuelling time.

The mission of the conference is to discuss the European Commission's (EC) programmes, policies, initiatives and funding for hydrogen-fuelled buses and hydrogen refuelling stations (HRSs). It will evaluate the progress so far, highlight opportunities in the deployment of hydrogen-fuelled buses and development of infrastructure in Europe, provide information on procuring, financing, operating and maintaining hydrogen-fuelled buses as well as HRSs and discuss the experience so far, recent developments, best practices, issues with large-scale deployment and lessons learnt. It will also showcase noteworthy case studies and new and existing technologies.

The conference will bring together policymakers, transit agencies, city government officials, OEMs, bus manufacturers, suppliers of bus components, technology providers, energy providers, hydrogen-fuelling infrastructure providers, funding agencies, multilateral development banks, consultants, researchers and academicians.

The one-day virtual conference will have seven targeted sessions and case studies, with participation from a wide range of international experts, who will provide valuable insights and actionable advice. The agenda will cover the plans of cities for deploying hydrogen-fuelled buses and setting up HRSs in Europe. It will also highlight the latest developments and solutions to improve customer experience.

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

There will also be a dedicated session on the experiences of leading cities in the deployment of hydrogen-fuelled buses. This will provide an opportunity to learn how to deploy hydrogen-fuelled buses and set up fuelling infrastructure, mobilise funding and manage stakeholder expectations.

Key topics to be explored

- EC's policies, projects, plans and funding
- Case studies, key deployments, experience so far
- Future plans and opportunities for manufacturers of hydrogen-fuelled buses
- Key emerging recent trends and market outlook in Europe
- Total cost of ownership (TCO) of hydrogen-fuelled buses
- Operations and maintenance of hydrogen-fuelled buses
- Hydrogen refuelling stations and infrastructure
- Hydrogen valley projects and impact on mobility
- Impact of Covid-19 on the deployment of hydrogen-fuelled buses
- Sources of financing
- Procurement of fuel cell buses and HRS
- Economics and business models
- Cost-effective integration of fuel cell buses in local bus fleets
- Technical and safety specifications for refuelling infrastructure
- Commercialisation of hydrogen
- Overcoming barriers to the uptake of hydrogen-fuelled buses and roll-out of infrastructure

Benefits of attending a virtual event

- Live interaction with senior speakers and key stakeholders (Q&A facility)
- Easy connectivity to geographically dispersed delegates (click of a mouse)
- Virtual meetings and interactions with industry peers and leaders
- Cost effective (lower ticket price as compared to a physical conference)
- Flexibility and convenience
- Access to conference recordings to watch later 'on demand'

Second Annual Conference on

HYDROGEN-FUELLED BUSES AND INFRASTRUCTURE IN EUROPE

February 11, 2022 | 9:30 - 16:30 Central European Time (CET)

Tentative Agenda

Key Trends and Outlook

- Key emerging trends, recent developments
- Policy and regulatory framework in Europe
- Key pending issues and challenges
- Market outlook, opportunities and the way forward

European Commission's Initiatives

- Initiatives, programmes, funding and progress so far
- Europe Green Deal, Fit for 55
- H2Bus, JIVE, JIVE 2, CHIC, 3Emotion
- A hydrogen strategy for a climate-neutral Europe

Public Transport Authority (PTA)/ Public Transport Operator (PTO)

Perspective: A Panel Discussion

- Experience so far,
- City-level policies and initiatives for promoting the deployment of fuel cell buses
- Lessons learnt and best practices
- Future plans

Project Conceptualisation, Financing and Planning, and Procurement

- Procurement strategies
- Development of tender documents, selection of suppliers, development of contracts
- Sources of financing
- Planning for operations of hydrogen buses

Economics of Hydrogen-Fuelled Buses

- Comparative analysis of clean buses (electric, hydrogen, LNG, bio-fuel, retrofitted buses, etc.)
- Total cost of ownership (TCO) of hydrogen-fuelled buses
- O&M costs of hydrogen-fuelled buses

Hydrogen Refuelling Stations (HRSs) and Infrastructure

- Procurement of HRSs
- Supply options
- Planning for HRS operations
- Standards and regulations
- Scaling-up infrastructure
- Impact of the revision of the Directive on Alternative Fuel Infrastructure (DAFI)

Scaling-up in 2020s

- OEM perspective: Launching new technologies, reducing costs, improving efficiency Commercialisation of hydrogen
- Supplier perspective
- Policy recommendations

Potential, Future Plans and Market Outlook

- Plans of cities to deploy hydrogen-fuelled buses and set up HRSs
- Short-term, medium-term and long-term targets
- Investments and timelines
- Hydrogen valley projects and impact on mobility

A blue and white hydrogen bus is parked on a paved surface. The bus has a large white 'H2' logo on its blue front panel. The background shows a modern building with large windows and some greenery.

WHO SHOULD ATTEND?

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

- Public transport authorities and transport operators
- Government transport departments
- City governments/municipalities / local bodies
- Policymaking and regulatory bodies
- Hydrogen-bus OEMs and technology providers
- Hydrogen producers and suppliers
- Fuel cell companies
- Infrastructure OEMs
- Hydrogen storage companies
- Suppliers of hydrogen bus components
- Technology providers
- Multilateral agencies
- Banks and financial institutions
- Academic institutions
- Research and development organisations
- Transport associations
- Consultants
- Oil & Energy Companies
- Environmental Services organisations
- Hydrogen Generation Plants providers
- Providers of Hydrogen Refuelling Stations

Key benefits to participants

- Gain insight into the policies and projects for hydrogen-fuelled buses
- Learn about best practices in financing, procuring and deploying hydrogen-fuelled buses
- Explore strategies to resolve key legal, technical, operational and financial issues facing the deployment of hydrogen-fuelled buses
- Gain exposure to new technologies and market development strategies for hydrogen-fuelled buses
- Understand the lifecycle cost analysis for hydrogen-fuelled buses to build financially-viable business models
- Network with urban transport authorities, operators, key vendors, financiers, technology providers and consultants
- Gain valuable experience by participating in interactive discussions

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**), 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 2020; NFC Mobile Ticketing for Transit 2018; 1,000 Global Rail Projects Database; Investment and CAPEX Plans of Transit Authorities/Agencies Report 2019-2030; Global Light Rail Projects Report 2018-2030; Global Metro Projects Report 2018; and Europe Urban Bus Market Outlook Report 2017-2030.

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.

SPONSORSHIP (Limited number)*

The virtual conference will provide an excellent opportunity for organizations to showcase their products and services. Whether you're a large global company, a startup, or somewhere in between, our offerings can be designed to achieve your goals.

- A 15-minute speaking slot (presentation should be relevant and not just a sales pitch)
- Company logo will be displayed on the event website and the registration page
- Company logo will be displayed in the opening and closing slide/waiting room
- Special mailer to our database announcing your participation with details about your company/products
- Sponsor company mentioned in each promotional mailer
- Mentions in social media posts including a post on the speaker from your company
- Mention in the webinar opening and closing remarks
- 6-9 attendee logins for the employees of the company (regular fee for eight logins is EUR540)
- Contact list of attendees

Pricing: EUR2000 (early bird discount until December 17, 2021), full fee of EUR2500

For further information, contact: Surbhi Rakheja

Email: surbhi.rakheja@globalmasstransit.net, Mobile: +44 024 7698 0693

DELEGATE FEE

Delegates	Price before December 15, 2021	Price before January 14, 2022	Standard Fee
1 Login	USD 126	USD 153	USD 180
2-3 Logins	USD 210	USD 255	USD 300
4-5 Logins	USD 294	USD 357	USD 420
6-9 Logins	USD 378	USD 459	USD 540
10-20 Logins	USD 462	USD 561	USD 660
Special category delegates *		No fee	

*Registration is complimentary for transit agencies and government authorities.

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/3o5gW9q>

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

2. Wire Transfer:

Beneficiary: India Infrastructure Publishing Private Limited*
Bank Name: The Hongkong and Shanghai Banking Corporation Ltd
Bank Address: R-47, Greater Kailash – 1, New Delhi - 110048
Bank Account No: 094179587002
Swift Code: HSBCINBB

**Global Mass Transit is a division of India Infrastructure Publishing Private Limited.*

TERMS AND CONDITIONS

Payment Policy

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

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 EUR30. 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

For registration and sponsorship opportunities:

Surbhi Rakheja, Global Mass Transit Research
Email: surbhi.rakheja@globalmasstransit.net
Mobile: +44 024 7698 0693

For speaker participation opportunities:

Namrta Bangia, Global Mass Transit
Email: namrta.bangia@globalmasstransit.net
Mobile: +44 20 7097 5717

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