




EUROPEAN ZERO EMISSION BUS CONFERENCE: SUMMARY




The third edition of the European Zero Emission Bus Conference took place in Paris, France, last week on 17th & 18th November 2021. Over 300 stakeholders from all across Europe attended the event.

Representatives from local authorities, public transport operators, industry, and international regulatory and financing agencies discussed the routes to accelerating the rollout commercialisation and technological readiness of zero emission buses. The conclusion: **zero emission bus deployment must be accelerated. Dedicated programmes are needed to make zero emission technologies affordable and accessible to all European countries.**

The ZEB conference called on European leaders and policy makers to take action required to support uptake of clean vehicles by:

-  Creating policies and funding programmes on EU and national level to support operators and public transport authorities to transition to zero emission options.
-  Establishing the conditions for fair competition in global bus markets.
-  Championing policies to encourage consumer behavioural change to increase public transport ridership to decrease the number of cars on European streets.

KEY MESSAGES:

-  European and national projects have demonstrated battery and fuel cell bus technologies are **both viable replacements for diesel buses**. Focus is now on cost reduction through scale and improved operational efficiency.
 - Electric buses are sold in thousands of units per year whilst FCEBs are scaling up through 100's of units per year.
 - Now is the time to **move beyond demonstration projects for city buses** and transition to larger-scale deployments.
-  Policy makers, local authorities and operators express the urgent need to **make clean public transport affordable for all European countries**.
 - Stakeholders should exploit learnings from operators and depots with ZEB experience as well as Cross-Atlantic zero emission mobility solution learnings to maximise likelihood of success
 - **Retrofit options and second hand vehicle markets** must be developed for battery and fuel cell buses.
 - Options for second-life batteries in stationary and mobility applications are under development.
-  OEMs demonstrated that they were **committed to both battery electric and fuel cell electric bus solutions**. It is important that a level playing field exists between the two options to ensure that PTOs can match technology with route requirements.
 - New technology solutions are coming to market to meet PTO requirements. Caetano's 18m electric and hydrogen drivetrain bus will come to market in 2023.



- 🚌 **More options for intercity, regional transport are being developed** (e.g. HyFleet coaches from Freudenburg and Flixbus). Decarbonisation of intercity routes must be accelerated by provision of additional funding and financing to support development of battery and hydrogen coach options.
- 🚌 Operators have experience of **operating zero emission vehicles with largely positive experiences**. There needs to be collaboration between the state and private sector to ensure this uptake continues and to mitigate delays caused by recovery from the pandemic.
 - This includes help with financial aspects such as end of life considerations and safety regulations as tenders are nearly 100% focussed on cost.
- 🚌 Development of supply chains, skills and training is as important as ZEB KPIs. **The workforce needs to scale with ZEB deployments** to maintain operator satisfaction and address emerging challenges.
- 🚌 **Transition to ZEBs requires holistic planning**. PTOs need to engage with energy suppliers (whether that be electric or hydrogen), vehicle OEMs and the local planning authority to ensure ample time for planning, permitting and construction – aligning vehicle deployment with infrastructure availability.
 - Bringing authorities along this journey will ensure future deployments are simplified and expedited through higher levels of education.
- 🚌 Significant modal shift is needed to meet global carbon emissions targets to keep global temperature increases below 1.5°C level. **Policy makers and transport authorities must develop new mechanisms to increase public transport ridership** to encourage citizens to choose public transport options over cars. It is not just about zero emission public transport but more public transport.
- 🚌 Whilst there is rightly a focus on modal shifts from private to public transport, **mobility as a solution** is emerging as an opportunity to revolutionise public transport and transform the sector from “station-to-station” to “door-to-door”.
- 🚌 Increasing private finance solutions are becoming available to shift the risk of transitioning to zero emission vehicles from operators to private banks and investment companies. **Private financing institutions play a critical role** in building confidence among operators and public transport authorities to deploy ZEBs now, before full data on reliability and performance across the full vehicle lifetime is available.
- 🚌 “Bus-as-a-service” and “battery-as-a-service” models are available to increase affordability of ZEBs.

For the presentations and the full program please contact Madeline Ojakovoh
(madeline.ojakovoh@element-energy.co.uk)

