

Wrap up & Conclusions: “The electric depot. Chargign & managing large e-bus fleets”.

Sustainable Bus Webinar 6th May 2021

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Key messages

1. Strong will and leadership of cities through decarbonisation strategies and zero-emissions public bus fleets by 2025-2030
 - Some cities have more ambitious targets than the ones set by the current policy framework (CVD).
 - Drivers are climate protection, improved air quality, and reduced noise levels and vibrations.
2. System approach vs vehicle approach and key elements for successful fleet upscale:
 - Standardisation and interoperability of high power fast charging (up to 600 kW)
 - IT tools for optimised fleet operation and its integration into the system
 - Telematic diagnosis, scheduling and dispatching, eco-driving, real-time passenger information, etc.
 - Smart charging strategies and energy storage systems
 - Considerable savings potential on energy bill by applying smart charging algorithms.
 - Depot upgrade involves increased energy needs and power capacity; assessment of new depot location and access to grid.
 - V2G charging (nascent in public bus fleet sector)



Key messages

3. Bus electrification requires strong cooperation among all stakeholders

- Today's program lined up key players in the field: operators, bus/charger OEMs, IT solutions companies, energy utilities, etc.

4. Challenges faced by operators amidst current pandemic

- Reduced ridership and revenues vs plans for fleet renewal.
 - CAPEX investment for clean bus and depot upgrade is high
 - UITP Bus Fleet Renewal Checklist
- Find suitable business models based on fair risk sharing and solid cooperation PTA/PTO to minimise technological risk and financial impact on operators' side
 - UITP Tenders Structure Document

5. Need of engaging staff and end user/passengers with e-bus technology to revamp the image of the urban bus

- Excellent opportunity with the intro of e-powertrains (innovation, comfort, environmental friendliness).
- Gain back passengers' trust on PT in the post-pandemic period.



Key messages



6. R&I projects, like ASSURED (www.assured-project.eu), key to advance the sector through innovation and collaboration among industry-operators-academia.

ASSURED has successfully delivered a set of standards and use case protocols for e-bus charging that enable to verify interoperability

- Key to ensure fleet upscale and flexibility of operation
- ASSURED 1.0 Interoperability Reference: <https://assured-project.eu/news-and-events/news/assured-project-brings-standardisation-of-e-bus-charging-one-step-closer>

7. Initiatives like the EC's Clean Bus Europe Platform, which is bringing together all players of clean bus deployment to exchange knowledge & expertise on clean bus techs among EU MSs.



CLEAN BUS EUROPE PLATFORM

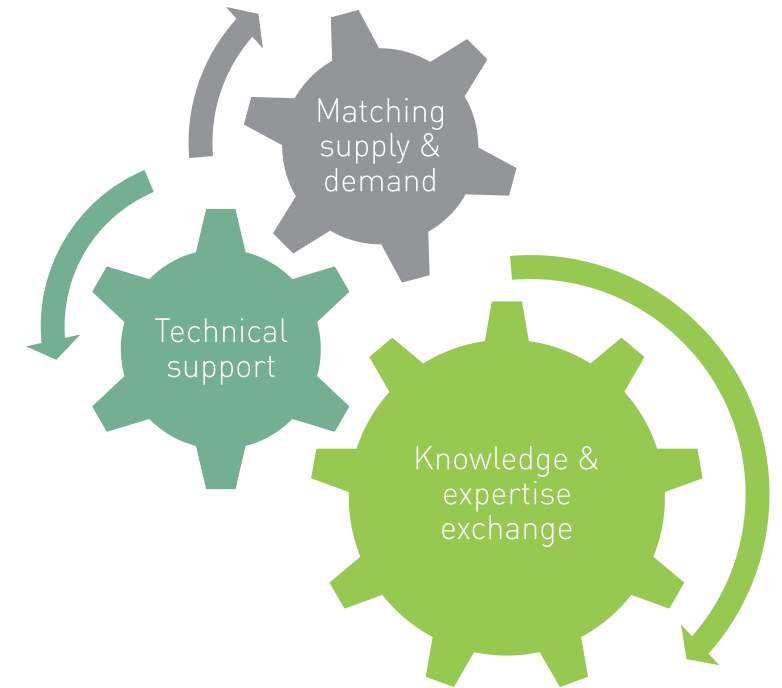
www.cleanbusplatform.eu

The Clean Bus Europe Platform is
financed by the European Union.



The Platform as enabler of large scale deployment

- EC's project in the frame of Clean Bus Deployment Initiative, managed by UITP and its Partners.
- The Platform is made of Cities, PTAs, PTOs, industry, funding & financing entities, associations, and more related to clean bus deployment
- Strategic line of action to develop, implement and support cities in the transition towards clean bus fleets
 - Dedicated work plan to provide knowledge exchange and technical support, as well as to facilitate access to vehicle/infra applications and funding/financing
 - Social Dialogue activities in cooperation with European Transport Workers Federation
- Technologies considered:
 - **Battery electric**, Plug-in hybrid, Fuel cells & hydrogen, Natural gas, In-motion-charging trolleybuses (IMC)



Main activities and services



Interesting for you...

- Clean Bus Toolkit section:

- **Market Monitoring**

- European bus data (tenders, orders, in service)

- **Library**

- Interactive tools for planning
 - Webinars on clean bus technologies and related topics
 - Study visits to experienced cities
 - Marketplaces with the Industry & Financing entities



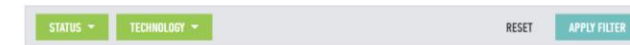
MARKET MONITORING

Tenders, orders & deployment

In collaboration with sustainable-bus.com.



Here you will find the status of clean bus deployment in Europe. Browse the interactive map for an overview of Open tenders*, Bus orders* and Deployed buses*, or check the newsfeed for the latest updates!



85 news

Stagecoach has ordered 44 e-buses for Scotland
2 April 2021 [READ MORE](#)



VDL marks again its signature on KV Cologne e-bus fleet. A new order for 51 vehicles
1 April 2021 [READ MORE](#)

The largest e-bus order so far in Scotland goes to BYD ADL (by First Bus)
31 March 2021 [READ MORE](#)

LIBRARY

Knowledge and info on clean bus deployment



The CBEP Library provides material related to clean bus deployment, including guidelines, publications, legislative documentation, and webinars. All material is categorised according to the four stages of clean bus deployment: "if", "how", "what" and "when".

IF - KNOW & DECIDE

Material related to first stages of clean vehicle deployment, incl. identification & engagement of bus system actors, and identification of legislative and policy framework.

WHEN - PLAN, REGULATE, FINANCE

Material related to funding & financing schemes, ensuring support from authorities, setting up project governance, etc.

WHAT - SPECIFY, PROCURE, DEPLOY

Material related to the procurement process, downstream partnership

Fuel Cell Electric Bus Deployment Data in Europe (Feb 2021)

26 February 2021

[Info-factsheet](#)

This document provides the snapshot projections about the number of FCBs which are in full commercial operation today (as of February 2021) as well as future deployments in the coming 18 months thanks to the bus order announcements by various European cities.

[jive-fcb-deployment-data-in-europe-as-of-feb-2021.pdf](#)

Form to sign Clean Bus Declaration

18 November 2020

[Legislative document](#)

ec.europa.eu

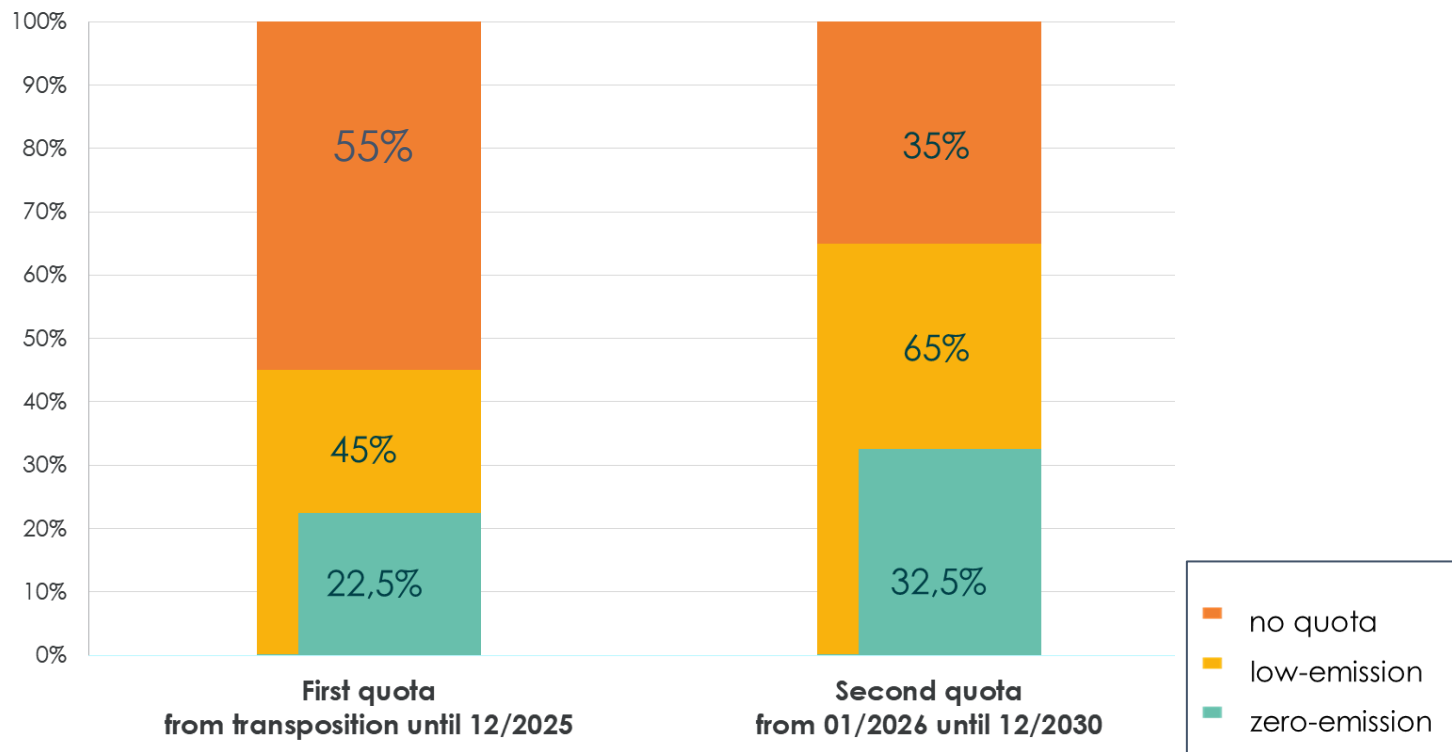
Thank You & Reach out!

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www.cleanbusplatform.eu



Clean Vehicle Directive: Quotas for public procurement of buses



A clean bus is fuelled by:

- electricity
- hydrogen
- natural gas (CNG, LNG)
- most biofuels
- synthetic and paraffinic fuels
- liquefied petroleum gas (LPG)

A zero-emission (tailpipe) bus is a vehicle:

- without an ICE, or
- with an ICE that emits less than 1g CO₂/kWh or less than 1gCO₂/km