Clean Bus Europe Platform: The road to sustainable cities

Africa Regional Workshop & Training on Clean Buses
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CHALLENGES FOR FLEET ELECTRIFICATION

- Higher upfront costs
- Standardisation & interoperability of e-bus charging
- New challenging operation
- New ways to procure vehicles and equipment
- Need to reinforce cooperation among energy and bus stakeholders

Charging solutions limited up to 450 kW without interoperable / standardised interfaces
- Impact of charging on battery life time not well known
- Uncertainty about grid stability
- Energy management and charging strategies applied at vehicle level instead of fleet level
TODAY’S CHALLENGES

Reduced ridership and revenues vs plans for fleet renewal

- Increased costs to apply new sanitary procedures (cleaning & disinfection)
- CAPEX investment for clean bus and depot upgrade is high
  - UITP Bus Fleet Renewal Checklist (https://www.uitp.org/publications/bus-fleet-renewal-checklist/)

Opportunity with the intro of e-powertrains (innovation, comfort, environmental friendliness) to revamp urban bus systems.

- To rethink and optimise the system.

Gaining passengers back & restoring trust on PT

- New context: home-office, use of other modes (increased car use?)
KEY FACTORS OF E-BUS DEPLOYMENT

1. From vehicle to system procurement
2. Standardisation & interoperability of high power fast charging
3. IT intelligence for optimised fleet operation and integration with charging infrastructure
   • Telematic diagnosis, scheduling and dispatching, eco-driving, real-time passenger information, etc.
4. Smart charging strategies & energy storage systems
   • Savings potential on energy bill by applying smart charging algorithms.
   • Depot upgrade (energy needs and power capacity, access to grid, etc.)
5. Strong cooperation among & early involvement of all stakeholders
6. Know-how & best practice exchange with peer cities
PHASED APPROACH TO E-BUS DEPLOYMENT

1. **IF**
   - KNOW
   - DECIDE

2. **WHEN**
   - PLAN
   - REGULATE
   - FINANCE

3. **WHAT**
   - SPECIFY
   - PROCURE
   - DEPLOY

4. **HOW**
   - OPERATE
   - MAINTAIN
Supporting EU Policy Framework

- Strong will and leadership of cities through target setting and 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 for energy transition are EU and national policies, climate protection, improved air quality, and reduced noise levels and vibrations.
  - Green Deal, CVD, AFID
EC CLEAN VEHICLE DIRECTIVE: QUOTAS FOR BUS PROCUREMENT

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
EC CLEAN BUS DEPLOYMENT INITIATIVE

Launched in 2017 to speed up the introduction of clean buses across Europe.

Elements for the scale up:

• Policy framework
• Financial & funding framework
• Exchange of best practices and knowledge

The Clean Bus Europe Platform is the strategic line of action to develop, implement and support the transition towards clean bus fleets.
The Project

• Initiative of the EC, in the frame of the Clean Bus Deployment Initiative
  • Running July 2019-June 2023
• Network of stakeholders related to CBD
  • PTOs, PTAs and city authorities
  • Industry: bus OEMs, charging/refuelling suppliers, energy grid operators...
  • Funding and financing institutions
• Twinning approach: Host (experienced) & Target (learning) Cities
• Dedicated work plan to support cities and operators pursuing their plans
  • Knowledge & expertise exchange
  • Technical support
  • Matching supply & demand
• Technologies
  • Battery electric, Plug-in hybrid, Fuel cells & hydrogen, Natural gas, In-motion-charging trolleybuses

www.cleanbusplatform.eu
Work pillars, activities, services, products

- Capacity building & knowledge transfer
- Technical support & facilitation
- Social dialogue on impacts on workforce
- Dissemination & Monitoring
Work pillars, activities, services, products
Interesting for you

• Clean Bus Toolkit section:
  • Market Monitoring
    • European bus data (tenders, orders, in service), regularly updated
  • Library
    • Interactive tools for planning

• Coming next:
  • Webinar “Clean Bus Procurement”, December, 2nd, 10.00-11.30 CET
TUMI E-BUS MISSION

- Project Funded by the German Ministry for Economic cooperation and Development (BMZ)
  - C40 Cities, GIZ, ICCT, ITDP, ICLEI, UITP and WRI
- Accelerate the transition to e-buses in the Global South
- The TUMI E-Bus Mission
  - Deep dive support to 20 cities in their transition towards electric bus deployment [2022] – capacity building, planning, technical assistance
  - Upscale support to 100 cities, finally inspire and follow 500 [2025]
- Ambitious target of 100,000 e-buses
Questions?
THANK YOU!

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