Seizing the potential of electric fleets for the urban quality of life

Electrifying public and private fleets is a powerful way to decarbonise car transport. Despite discussions on unsustainable charging energy or resource consumption for batteries, the impact on local noise and emission pollution is unquestionable, and the future potential of **charging with 100% renewable energy** is very appealing. Electrification of private and public fleets is strongly promoted in the EU to fulfil the Green Deal goal to be climate neutral by 2050. For MENA countries, the abundance of solar energy makes it even more attractive to invest in a broad electrification of fleets. For example, Qatar plans to electrify their entire public transport fleet. Dornier has also supported the Saudi Arabian Ministry of Transport and Logistics in exploring potential electric public bus fleets.

With an **abundant fuel supply** throughout the MENA region, conventional vehicles are an obvious economical choice for consumers. The region also grapples with **high temperatures**, which can limit the range of Battery Electric Vehicles (BEVs), leading to increased range anxiety among potential users. Currently, the energy mix in the Kingdom of Saudi Arabia (KSA) is split evenly between oil and gas, although the Vision 2030 target is to reach a share of 50% for renewable energy by 2030. The UAE relies on oil and gas for over 90% of its energy, with a clean energy target of 30% by 2030.

For the European Bank for Reconstruction and Development (EBRD), Dornier has supported the Greek and the Kazakh governments in preparing **national strategies for the electrification of fleets, the implementation of charging infrastructure and the development of e-mobility ecosystems and business models**. In addition to incentives for buying electric cars, pioneering the electrification of public fleets is an excellent way to showcase the advantages of e-mobility, such as noise and emission reduction and simultaneously be a good example for the private sector and private households. However, substituting conventional buses with e-buses requires time due to the long procurement cycles. Moreover, en-route *opportunity* charging infrastructure is costly and requires a reliable connection to the electricity grid. Finally, public transport still plays a minor role in the MENA region, with modal shares ranging from less than 2% in Jeddah, Bahrain or Muscat, over 16% in Dubai or 20% in Alexandria (data from 2013 to 2017, UITP 2020).

Some e-mobility strategies also focus on smaller vehicle sizes for **taxis or shared mobility schemes** (e-bikes, e-kick-scooters, e-mopeds). For example, in Greece, the Green Taxi scheme provides incentives for e-taxis with the obligation that all new taxis must be electric from 2026. In Dubai, the RTA released a five-year plan demanding that all taxis be "eco-friendly" (hybrid, hydrogen-powered or fully electric) by 2027. In the future, taxi fleets will be a showcase for low-emission transport and driverless fleet operations, with current taxi fleet pilot projects in the USA and China revealing driverless technology to be already quite advanced.

Driverless e-taxi in China; source: Own photo/ SGEC project

Overall, **local planning authorities** should therefore anticipate high electric fleet demands and plan for implementing the according charging infrastructure for the different types of fleets and vehicle sizes expected to enter the market in the coming years.