

# Public transport ahead on electric path

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Automobile manufacturers are now under government pressure for shifting to electric vehicles (by 2030). But, public transport has moved much ahead in absorbing this way of travelling.

At least six cities and states are either already operating or are in an advance stage of procuring e-buses.

Experts say the move to have e-vehicles (EVs) should start with public transport, as it is easier to create an ecosystem for them. "Adoption of electric buses in city application might be faster, as they have fixed routes and it could be easier to set up charging infrastructure for them. Beside, public transport has the potential to cater to 85 per cent of transport needs of people in any given city. And, it will help in generating volumes and allow OEMs (original equipment makers) to manufacture the electric bus components in India, reducing the overall cost and making e-buses commercially viable for private operators," Vinit Bansal, founder and managing director of EV Motors India, told *Business Standard*.

Anil Chaudhry, France-based Schneider Electric's country president and managing director, however, says public transport and private vehicles would have to move to EVs side by side.

The Karnataka government recently issued a policy on EVs. It was also the first state where EVs plied for public transport. Bangalore Metropolitan Transport Corporation in 2014 operated a Chinese BYD electric bus on the city's streets for a three-month trial period. In December 2015, technology provider KPIT, with the Central Institute of Road Technology (CIRT), launched an electric bus based on indigenous technology.

Many cities started with retrofitting before moving on to new e-buses. CIRT and KPIT, for instance, floated a tender to retrofit 12 old diesel buses into electric ones for Pune in 2016. The city's civic body is now looking at procuring 100 electric buses and has invited an Expression of Interest (EoI) for these.

CIRT & KPIT retrofit 12 old diesel buses in Pune into electric

## MOVING TOWARDS ELECTRIC TRANSPORT



In July 2016, Himachal Pradesh's state road transport corporation floated a tender for design, manufacturing, supply and commissioning of 25 battery-operated passenger transport vehicles. The same year in April, Mumbai public transport operator BEST floated a tender to retrofit five old buses into electric one. In January this year, BEST floated another tender for the supply of six electric buses.

According to industry estimates, with 1.5 million in the private sector and 150,000 in the public sector, India has about 1.65 million buses. "It is expected that over the next 10 years, these will be transitioned to full electric buses," said Bansal. In 2012-13, at least 250 million people used government-owned buses daily. The country's population is expected to reach 1.35 billion in 2021, with 550 million expected in urban areas. The projected requirement for buses is about 645,000, said Bansal.

There are 71 state transport undertakings (STUs). The top 26 operate about 127,000 buses and the others another 11,650. "STUs constitute only nine per cent of the ownership pattern. Another 38 per cent is with private owners and 53 per cent is with school and employee transport operators," adds Bansal.

Incorporated in India in

2016 by its US-based parent, EV Motors is a technology provider for electric buses and offers services for e-mobility within Indian cities through battery technology, developing of charging infrastructure and establishing captive supplies of clean energy.

According to Bansal, the total cost of ownership of a nine to 12-metre electric bus is ₹2.5-3.5 crore over 10 years — including acquisition, operating and maintenance cost. "The purchase price is comparatively higher than a conventional bus but operating costs are significantly less and would outweigh its initial purchase price in a few years," he says.

To promote private participation in public transport, the rate for EVs should allow commercial viability, he says. For faster adoption of electric buses, the policy framework should allow multiple technologies to compete. There should also be a policy framework for charging infrastructure.

Chaudhry says Schneider has the technology to set up charging stations. "We do it globally and we can adapt it in India for meeting local standards."

The central government is considering whether to allow state-owned power utilities to set up fast-charging stations. And, a scheme for e-buses to swap drained batteries with fully-charged ones at depots in some metros. These would be part of the National Electric Mobility Mission Plan that aims to get six-seven million EVs on the roads by 2020.

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