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E-rides overtake e-drives

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In city, 2-wheeler sales account for over 90% of non-transport electric vehicles in last five years; 23,570 e-bikes registered between 2017-2021; cars not catching on

Private electric two-wheelers are witnessing increased sales in Bengaluru with sales accounting for over 90 per cent of all non-transport electric vehicles in the last five years. According to official data on the registration of all private electric two-wheelers and four-wheelers, the adoption of electric cars in the city has been minimal.

While 23,570 electric two-wheelers have been registered between 2017 and 2021, only 2,141 registrations were made for electric cars. Experts say high initial cost and anxiety about the technical superiority of electric cars over conventional four-wheelers are some of the reasons behind this low rate of adoption.

Dr Ashish Verma of the Sustainable Transportation Lab at the Indian Institute of Science said, "Data shows that the rate at which the government would like the adoption of electric four-wheelers to rise is still not happening. A lot of policy push is required. The biggest trigger for promoting the adoption of electric cars can be the lower cost of owning these vehicles. The need of the hour is to come up with more and more initiatives to bring down the cost."

The question of the technical superiority of EV cars over internal combustion engine (ICE) vehicles weighs heavy on consumers' minds. "I am still not sure about e-cars. Not only are the options limited in the market, but I also am still not sure if I will get an EV vehicle with a similar level of technical features as compared with an ICE four-wheeler," said a citizen.

Lack of charging infrastructure and related uncertainties are some other factors contributing to people abstaining from going for these four-wheelers. Experts say while the expansion of charging infrastructure in and around the city is at a nascent stage, it will play a critical role in boosting the penetration of electric cars.

Concerning the market forces and technology readiness, commercially-owned EVs are more attractive.

Year	No of two wheelers (non-transport) registered	No of four wheelers (non-transport) registered
2017	26	304
2018	706	226
2019	3016	133
2020	4581	425
2021	15241	1053
Total	23570	2141

Experts opine that while high cost and range anxiety are the factors responsible for the low number of electric car owners, commercial four-wheelers EVs are the low-hanging fruits. "Higher utilisation of commercial electric cars leads to a better return on the upfront cost. However, for private vehicle owners, even though an electric car makes sense when it comes to commuting within the city limits, long trips are still not possible. There is no charging infra on highways. However, BESCO's recent announcement about the installation of charging stations across the highways around the city might lead to a boost in the sale of electric cars," said Dr Vinay S Kandagal, Research Scientist at CSTEP.

According to experts, the adoption of electric vehicles in the four-wheeler segment is lagging and the rate of adoption of electric cars will shape up depending on how the governments go about the policies. "As of now, adoption of electric cars has been slow. While the economies of scale may bring down the cost of EVs in near future, innovation in battery and battery technology will play an important role. If the battery cost can be brought down by indigenous manufacturing, it will boost the adoption," added Dr Verma.

While battery swapping is a possible alternative to charging infrastructure, this technology too is at a nascent stage and lacks clarity on ways of implementation.

With no revision in the state EV policy around this time, experts are attributing it to the impact of covid on the general behaviour of people.