Going electric: The challenges

SUN Mobility

ELECTRIC vehicles have actually been around since the mid-19th century but the technology has not seen the kind of mass deployment that one would expect. The main reason for this, especially in a price-sensitive market like India, is the associated costs. Though battery costs have come down, and technology has improved overtime, the total cost of ownership of EVs continues to remain significantly higher than conventional Internal Combustion Engine (ICE) vehicles. This is because batteries still contribute to a major chunk of the final cost of the EV—up to 50 per cent. So, the e-mobility revolution will truly take off, only when there is price parity between EVs and ICE vehicles.

The second deterrent stems from concerns about 'range anxiety'. Giving a lot of range is one of the ways to overcome this, but it drives up costs so much so that the first point becomes an issue yet again.

Thirdly, refuelling time—people are used to refuelling in five minutes, but conventional charging, takes anywhere from five to eight, and even fast-charging takes around an hour. However, none of these options seem particularly feasible, especially for those who drive for a living, because any time spent off road means lesser number of trips taken, resulting in reduced chances of generating income.

Lastly, considering 14 out of 20 of the world's most polluted cities are in India and that two- and three-wheelers and buses are responsible for over 80 per cent of urban air pollution, there is tremendous scope to electrify this segment and build a sustainable mobility ecosystem. Plus, with the Government's recent push for electrification and support via schemes like FAME-2, the time is right for working towards enabling the mass adoption of EVs.

SUN Mobility sees these challenges as opportunities and hopes to overcome them through its unique battery swapping solution for electric 2/3-wheelers and buses. Separating the batteries from EVs and the auxiliary systems with it can get EVs to be cost-neutral to ICE vehicles. Also, being able to swap your depleted batteries with fully-charged ones in a matter of minutes makes the process even faster than refuelling at a conventional petrol/diesel station! As a country which needs its people to travel at a low cost with zero pollution, being energy independent is very empowering.