



Electric Mobility – agenda for discussion

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Why electric mobility?



* Emissions in g/year. Source: The Urban Commute.

Use of clean fuel, and particularly electricity, for mobility can have significant impact on emissions from transport.



Electric mobility in India – where are we headed?

Policy landscape



- Policy directive: National Electric Mobility Mission Plan drawn up in 2013 set a target of having 6-7 million electric vehicles by 2020.
- FAME (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) Scheme launched in 2015 to incentivise take up of e-mobility.
- Till July 2018, about 2,17,000 hybrid/electric vehicles (xEVs) have been given direct support by way of demand incentives
- In 2018, focus of FAME Scheme moved to public transport. 8 cities selected to buy 455 e-Buses.
- State level policies have followed – Delhi's draft EV policy.
- **How does policy intent transform into reality? How important is it for States to have their own policies?**
- **ZEV – Zero Emission Vehicles Mandate?**



Electric mobility in India – where are we headed?

Market forces



- Demand has been slow in personal vehicle segment despite incentives.
- Para-transit segment has picked up faster than anything else.
- Buses remain costly but important. Is it sustainable?
- **How to align policy with market forces? What should be the future shape of incentives?**
- **Subsidies, but for how long? And what happens then?**



Electric mobility in India – where are we headed?

Support infrastructure



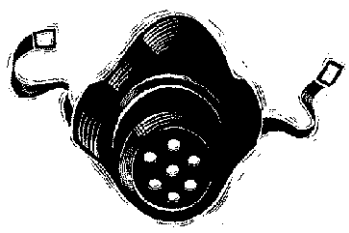
- Take up is dependent on charging infrastructure availability. Necessary to address “range anxiety”.
- Slow charging, fast charging, opportunity charging and battery swapping – all have impact on the e-vehicle design, cost and the overall ecosystem. **Do we need to move towards a particular charging paradigm?**
- As demand ramps up, requirement of raw materials will grow. **How will this impact supply?**
- **Standardisation vs Innovation?**



Electric mobility in India – where are we headed? **Operations and deployment**



- Little evidence on organized operations – **are we prepared?**
- E-Buses a very different proposition to standard buses. Need to take into account minute details like slope of roads (number of flyovers) for operations planning as they will impact range. **Are we going with an ecosystem approach?**
- Para-transit is growing rapidly. Organization will become necessary at some point to ensure optimal benefits. **What are the experiences?**
- Operating models will evolve – **how to assure regulation remains aligned?**



Thank you

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