

EV Update Media

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INDUSTRY INSIGHTS ON



- ▶ The EV market presents challenges that include market uncertainties, emerging competition from new players, and the presence of legacy giants.
- ▶ India is among the few that have agreed to the Global EV30@30 Initiative which requires minimum 30% of fresh vehicle sale by 2030 to be EVs.
- ▶ India's NITI Aayog has more ambitious targets: 80% of all 2-wheelers to be electric by 2030.
- ▶ Two wheelers are the preferred mode of transportation for many in the bustling streets of India
- ▶ Electric Vehicles (EVs) are strategically important as they decarbonize transport, an area conventionally tough to separate from emissions.

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Innovative Approaches to Enhance the Ecosystem for 2Wheeler EVs in India

Electric Vehicles (EVs) are strategically important as they decarbonize transport, an area conventionally tough to separate from emissions. Two wheelers are the preferred mode of transportation for many in the bustling streets of India with 21 crore plus registered 2-wheelers, three times that of 4-wheelers. However, only 6% of India's 2-wheelers are electric at present.

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Research and development (R&D) is the norm in young, technology-heavy industry such as EVs. Therefore, the innovation required to push EVs in the mainstream of mobility extends across the EV ecosystem, from OEMs and their suppliers to charging/swapping stations and policy makers.

Manufacturing Innovation will improve the range, throughput, and safety of EV batteries while making them lighter. Two significant tools in this direction are Concurrent Engineering (between OEMs and their suppliers) and Production Indigenisation.

Concurrent engineering will cut the time to market, which is significant when R&D are involved. It will also churn out safer and better batteries. Indigenous manufacturers can factor in their superior awareness of local conditions in EV design. For example, welding setup design to deliver sturdier weld joints to withstand the peculiar road conditions.

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Windergy 2023

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4th — 6th October

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Battery Charging and/or Swapping Infrastructure addresses range and charging time concerns. Swapping is faster than rapid charging, and delinks battery expenses from EV expenses. Innovation related to monitoring of battery health, electrical and mechanical, will help assure EV users that they are exchanging equivalent quality batteries.

Policy Initiatives such as standardization of battery packs will make interoperability possible, and further expand the utility of swapping. Administrative innovation is necessary here to balance technological breakthroughs which usher in changes, possibly disruptions, and the broad uniformization that comes with the development of standards.

Other forms of administrative innovation will be needed for better targeting of existing promotional measures and their faster clearances. Such measures include the in-the-making Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles 3 (FAME 3) scheme and the Production Linked Incentive (PLI) scheme.

Policy makers favour India's manufacturing sector, for it is a major creator of employment and wealth. Technological and administrative innovation for EV promotion has the potential to at least partly transform India's manufacturing sector.