

Q → The vision regarding electric vehicles in the country depends on various factors to ensure better developmental outcomes. Explain

A → Electric vehicles are being described as "vehicles of the future" as it reduces the dependence on polluting fossil-based transportation which is the 3rd most emitting sector in India.

Impact

- Reduced CO₂ emissions
- Reduced oil import bill which costs \$110 B / year
- Sustainable Development
Use of e-rickshaws increased dramatically
- Factors & Challenges
- Import-dependent
↳ Nearly 70% of equipments imported from China including Li-ion batteries.

- Post pandemic economic shock has put budgetary constraint as main focus on health, hunger & education.
- GDP contracted by 7.3% in 2020-2021.
- shifting from diesel & petrol to coal-based energy solution is not a long-term solution, since coal provides nearly 60% of electricity generation.
- Poor private sector participation as well as insufficient infrastructure required for building charging points/stations as we need 5 million of them.
- Government efforts
- ₹18,000 cr PLI scheme for battery manufacturing
- National Electric Mobility mission plan.
- Launched phase-II of FAME India scheme with a target of 30% of EV mobility by 2030.
- old vehicle scrapping policy.
- BS-VI fuels

Way forward

- Alternative to Li-ion batteries, cheaper Na-ion batteries or Al-ion batteries can be used.

- GST levied on equipments & EV should reduced to a minimum of 5% slab or zero percent to boost its sale & adoption.
- Improvement in Industry-Academia linkages is a must to fuel research in this field.
- Renewable energy should be the only source to ~~pro~~ rather than fossil-based energy. •

Mobility is the key driver of economy and making it non-polluting will not only help in attaining 33-35% reduction in emission intensity as per INDCs of Paris action plan as well as ~~just~~ ~~it~~ boosts our efforts to achieve \$5 Trillion economy by 2025