AIR Spotlight - Electric Mobility

Context:

The Spotlight conversation highlights the current position of India in Electric Mobility.

Participants:

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Electric Mobility

- Electric Mobility refers to the shift from fossil fuel to electric vehicles on a commercial and personal scale.
- It is a conscious movement towards clean energy and sustainability.
- India currently is in the initial steps of the transition towards electric vehicles.
- UN Environment's Electric Mobility Programme supports developing and transitional countries shift from fossil fuel to electric vehicles.

Automobile Sector

- The present global situation requires countries to put extra attention towards the automobile sectors in order to reduce the fossil fuel dependency to meet up Net Zero Emission.
- There has to be incentives in real terms for people to adopt electric mobility on a large scale.
    - Electric Mobility would reduce the Cost of Ownership in the long run allowing the public to save on the fuel expenditures.
    - The Central and State governments in India have been giving Tax Incentives to accelerate electric mobility.
    - The Central government has decided to keep the electric cars in the 5% GST Slab and the State government will have lower road taxes on electric vehicles.
- The initial cost of technology for the electric vehicles can be tackled with economies of scale in future.
- The government incentives would bridge the gap between the cost of electric and traditional vehicles.
- Also, electric mobility will offer a huge growth momentum to the overall economy.

Growth Opportunities

- Electric mobility will open up vistas for new economic activities as there would be new ways for the adoption, services, charging of such vehicles.
- Electric mobility would require new infrastructure which will initiate a lot of economic activities.
    - The charging infrastructure is the key to electric mobility which is divided into three parts.
    - Public Infrastructure will include the development of new charging stations like current day fuel stations.
        - The Ministry of Power has a detailed handbook prepared and is working positively towards it.
    - The Home infrastructure would be an automatic development as people start to buy the eclectic vehicles.
    - Retailer charging is the third infrastructure component and this has a huge potential for job creation.

Sustainability & Circular Economy

- Fossil fuel dependency has many disadvantages and there need to be alternatives that will cater to the goal of a sustainable future.
- Conventional vehicles with an internal combustion engine produce direct emissions through the tailpipe, as well as through evaporation from the vehicle's fuel system and during the fueling process. Conversely, EVs produce zero direct emissions.
- Hybrid electric vehicles (HEVs), plug-in hybrid electric vehicles (PHEVs), and all-electric vehicles (EVs) typically produce lower tailpipe emissions than conventional vehicles do.
- Electric vehicles would have a positive impact on the increased use of clean energy and also, India has a huge potential in the field of clean energy w.r.t. Solar and Wind Energy.
- Lithium, which is a rare metal, is used in the manufacturing of electric vehicles and there has been research to enable a better processing of the used Lithium to promote circular economy.

The Roadmap In India

- The BEV Model - Battery Electric Vehicles is currently being followed.
- The continuous efforts of the government will successfully complete the Electric Mobility Transition.