



ELECTRIC VEHICLE MANUFACTURING - GS III MAINS

Q. Why is green finance a significant need for the developing country like India? What are the measures taken by the government to enhance green financing in India? (15 marks, 250 words)

News: *India EV policy to encourage local production of premium electric cars*

What's in the news?

- The Union Government has approved a scheme aimed at promoting India as a manufacturing destination for e-vehicles (EVs) with the latest technology.

Key takeaways:

- The policy aims to attract investments from reputed global EV manufacturers to bolster the EV ecosystem in the country.

Key Provisions of the Policy:

1. Minimum Investment Requirement:

- A minimum investment of Rs 4150 crore (~USD 500 million) is required to qualify for the scheme.

2. Timeline for Manufacturing:

- Manufacturers must set up manufacturing facilities in India within 3 years, start commercial production of e-vehicles, and achieve 50% domestic value addition (DVA) within 5 years.

3. Domestic Value Addition (DVA):

- Localization levels of 25% by the 3rd year and 50% by the 5th year must be achieved during manufacturing.

4. Customs Duty Incentives:

- A customs duty of 15% applies to vehicles with a minimum CIF value of USD 35,000 and above, subject to certain conditions.

5. Limit on Duty Forgone:

- The duty foregone on imported EVs is limited to the investment made or ₹6484 crore, whichever is lower.

6. Annual Import Limits:

- A maximum of 40,000 EVs can be imported annually, subject to investment thresholds.

7. Bank Guarantee Requirement:

- Investment commitments must be backed by a bank guarantee, which will be invoked in case of non-achievement of DVA and minimum investment criteria.



8. Bank Guarantee Invocation:

- The bank guarantee will be invoked if companies fail to meet the DVA and minimum investment criteria outlined in the scheme guidelines.

Significance of E-Vehicle Manufacturing Policy:

1. Access to Latest Technology:

- Indian consumers will gain access to the latest technology in EVs, aligning with the Make in India initiative.

2. Strengthening the EV Ecosystem:

- The policy aims to strengthen the EV ecosystem by fostering healthy competition among EV players, leading to high-volume production and economies of scale.

3. Reducing Import Dependency:

- By promoting domestic production, the policy aims to reduce imports of crude oil, lower the trade deficit, and curb air pollution, particularly in cities.

4. Attract Global Players:

- The policy aims to attract global players like Tesla by offering investment incentives and import duty reductions.
- Global EV manufacturers, including Tesla, Inc., had been advocating for tariff concessions as a prerequisite for establishing manufacturing plants in India.
- With India currently being the world's third-largest automobile market and one of the fastest-growing, the EV sector is poised to emerge as a major category within the automotive industry.
- The automotive sector's substantial contribution to India's GDP underscores its strategic importance.

Challenges Ahead:

1. Limited Availability:

- There aren't enough charging stations, especially outside major cities.
- This creates a lack of accessibility and makes long-distance travel impractical for many EV owners.

2. High Installation and Maintenance Costs:

- Setting up charging stations requires significant investment, and maintaining them adds to the operational cost.
- This can limit the number of operators willing to invest, hindering infrastructure growth.

3. Range Anxiety and Long Charging Times:

- The limited availability of charging stations, coupled with the relatively short driving range of EVs compared to gasoline vehicles, creates anxiety for potential buyers. Filling a gas tank is quick while charging an EV can take hours.



4. High Upfront Cost of EVs:

- Electric vehicles themselves are more expensive than comparable gasoline models, due to battery and technology costs. This is a major hurdle for budget-conscious Indian consumers.

5. High Battery Costs:

- Battery technology is still evolving, and production costs remain high. This significantly impacts the overall price of EVs.

6. Lack of Service Options:

- The service network for EVs is still developing. Finding trained technicians and service centres equipped for EVs can be challenging for some owners.

Various Policy Measures for Promoting E-Vehicles:

1. FAME scheme II (2019):

- Offers incentives such as subsidies, tax rebates, and preferential financing for EV manufacturers and buyers.

2. National Electric Mobility Mission Plan (2013):

- Aims to achieve annual sales targets of 6-7 million hybrid and electric vehicles by 2020 through fiscal incentives.

3. Amendments to the Model Building Bye-laws (2016):

- It requires 20% of parking spaces in residential and commercial buildings to be allocated for EV charging facilities.

4. National Mission on Transformative Mobility and Battery Storage (2019):

- Aims to create an ecosystem for EV adoption and support the establishment of large-scale battery manufacturing plants.

5. Production Linked Incentive (PLI) scheme (2021):

- It incentivises EV and component manufacturing.

6. Vehicle Scrappage Policy (2021):

- It incentivizes the scrapping of old vehicles and the purchase of new EVs.

7. Ministry of Power's Guidelines:

- It mandates charging stations every 3 km along grids and every 25 km on highways.

Way Forward:

1. Improve Affordability Through Subsidies and Tax Benefits:



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- Subsidized loans, waived registration fees, reduced toll charges, free parking spaces, and income tax breaks can all help lower upfront costs.

2. Role of Government:

- Governments must aggressively invest in building charging stations in urban and rural areas. This includes partnerships with private sector firms and the rapid deployment of fast chargers using renewable sources of power where possible.

3. Role of Private Sector:

- Foster private sector involvement to encourage innovation in lightweight, high-energy-density batteries. Provide incentives and tax benefits to support research and development efforts in battery technology.

4. Awareness Generation:

- Raising awareness about the environmental benefits of electric vehicles, improving charging speed, offering attractive financing schemes, and showcasing model vehicles can mitigate concerns around performance anxiety and range anxiety.

