

## **ELECTRIC VEHICLE**

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**EE/EEE**

**JHARKHAND UNIVERSITY OF TECHNOLOGY (JUT)**

### **UNIT V: ELECTRIC VEHICLE (EV) POLICIES**

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#### **5.1 Goal of EV30@30 Campaign and National Electric Mobility Mission Plan 2020 (NEMMP)**

##### **EV30@30 Campaign Goals**

The EV30@30 campaign is an international initiative aimed at achieving a minimum of 30% electric vehicle sales by the year 2030. This campaign pushes governments, manufacturers, and stakeholders worldwide to hasten the transition to electric mobility. In India, the campaign aligns with national efforts to reduce greenhouse gas emissions, minimize air pollution in urban areas, and improve energy security by cutting reliance on imported fossil fuels.

##### **Indian EV Initiative Goals**

India's electric vehicle initiatives primarily focus on:

- Achieving large scale EV adoption.
- Enhancing indigenous manufacturing capacity.
- Developing robust charging infrastructure.
- Supporting research and innovation in EV technologies.
- Promoting policy frameworks to incentivize EV use across vehicle types.

##### **National Electric Mobility Mission Plan 2020 (NEMMP)**

- **Objectives:**  
Promote hybrid and electric vehicles to reduce petroleum dependence, improve air quality, and foster development of the automotive and energy sectors.
- **Government Actions:**  
Subsidies through Faster Adoption and Manufacturing of Electric Vehicles (FAME) scheme, support for charging networks, development of local manufacturing and assembly capabilities.

- **Barriers:**  
High vehicle and battery costs, lack of robust charging infrastructure, limited consumer awareness, and challenges in standardization.
- **E-Mobility Strategy:**  
Includes financial incentives, infrastructure rollout plans, public-private partnerships, and regulatory reforms.
- **Implementation Structure:**  
Coordinated by central and state ministries, industry bodies, and innovation agencies to execute policy measures and monitor progress.

### **Real-Life Example**

India's adoption of FAME II has significantly increased sales of electric two-wheelers, e-rickshaws, and buses, with newer policies targeting deeper penetration.

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## **5.2 Maharashtra Electric Vehicle Policy, 2021**

### **Objectives**

The Maharashtra EV Policy aims to foster widespread EV adoption by:

- Achieving at least 10% EV share in all vehicle registrations by 2025.
- Electrifying 25% of public transport fleets in major urban areas.
- Becoming India's leading EV manufacturing hub with gigafactories for advanced battery chemistry cells.
- Supporting research, innovation, and skill development related to EV technologies.

### **Demand Incentives for Electric Vehicles**

- Incentives linked to vehicle segments and battery capacity, offered in addition to the central FAME II scheme.
- Two-wheelers (L1 & L2) receive INR 5,000 per kWh with a cap of INR 10,000 per vehicle.
- Three-wheelers (L5M & L5N) get the same per kWh incentives with caps up to INR 30,000.
- Four-wheelers (M1 & N1 categories) receive subsidies capped at INR 1,50,000 and INR 1,00,000 respectively.
- Electric buses receive up to 10% of vehicle cost as incentive.
- Additional "early bird" incentives available for vehicles purchased within certain timelines.

### **Vehicle Segment-Wise Scrappage Incentives**

- To encourage replacement of old vehicles with new EVs, the policy offers scrappage incentives such as:
  - Up to INR 7,000 for two-wheelers.
  - Up to INR 15,000 for three-wheelers.
  - Up to INR 25,000 for four-wheelers.

### **Charging Infrastructure Incentives**

- Subsidies of up to 60% for slow chargers, capped at INR 10,000 per station.
- 50% subsidies for fast chargers, capped at INR 5,00,000 per station.
- Mandates for public charging stations every 25 km on highways.
- Guidelines to include EV-ready parking options in new residential and government buildings.
- Fast-track procedures for EV registration and no permit requirements for e-autos.

### **Skill Development and R&D Support**

- Integration of EV technology courses in state ITIs.
- Skill enhancement centers for EV and charging station maintenance.
- Incentives for setting up EV component manufacturing, battery assembly, recycling, and innovation facilities.

### **Real-Life Example**

Cities like Mumbai, Pune, and Nagpur witness growing EV fleets with infrastructural backing aligned to this policy.

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### **Summary**

India's EV30@30 campaign sets ambitious EV adoption targets globally, with NEMMP 2020 shaping national strategy. Maharashtra's 2021 EV policy complements this by offering targeted demand subsidies, scrappage incentives, and extensive support for charging infrastructure and skills development to accelerate electric mobility in the state.

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### **Keywords**

EV30@30, NEMMP 2020, Maharashtra EV Policy, Demand Incentives, Scrappage Policy, Charging Infrastructure, EV Manufacturing, Government Subsidies, Skill Development

This detailed coverage ensures all your syllabus topics on EV policies are thoroughly explained, suitable for exam preparation.

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