

4. PM E-Drive Scheme – Economy

The government has revised the PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) scheme to set new deadlines and unit caps for e-scooters and e-rickshaws

1.Introduction

1. India's transition towards electric mobility is a critical component of its strategy to reduce carbon emissions, improve air quality, and enhance energy security.
2. The PM E-DRIVE Scheme represents a comprehensive policy initiative aimed at accelerating the adoption and manufacturing of electric vehicles across multiple segments.
3. The recent extension of subsidies reflects the government's commitment to sustaining EV momentum and addressing emerging challenges.

2.Background and Evolution of EV Policy in India

Early Policy Framework

1. The National Electric Mobility Mission Plan laid the foundation for EV adoption by promoting clean mobility solutions.
2. The FAME I scheme focused on initial adoption and awareness of electric and hybrid vehicles.

Expansion under FAME II

1. FAME II emphasised scaling up EV adoption, particularly in public transport and commercial segments.
2. It also focused on expanding charging infrastructure and supporting domestic manufacturing.

Transition to PM E-DRIVE Scheme

1. The PM E-DRIVE Scheme, launched in 2024, subsumed earlier schemes such as EMPS-2024.
2. It represents a more comprehensive and integrated approach covering multiple EV categories and infrastructure needs.

3.Key Features of PM E-DRIVE Scheme

Duration and Extension

1. Initially implemented from October 2024 to March 2026, the scheme has been extended till March 2028.
2. Subsidies for electric two-wheelers have been extended till July 2026, while support for electric three-wheelers continues till March 2028.

Demand Incentives and Subsidies

1. Financial incentives are provided for electric two-wheelers, three-wheelers, buses, ambulances, and trucks.
2. Price caps ensure affordability, with limits set for different vehicle categories.

Support for Infrastructure Development

1. The scheme promotes the establishment of public charging stations to address range anxiety.
2. It also provides grants for capital assets such as electric buses and testing infrastructure.

Administrative and Awareness Components

1. The scheme includes Information, Education, and Communication activities to promote EV adoption.
2. It ensures effective implementation through project management support.

4.Coverage of Vehicle Categories

Broad-Based Inclusion

1. Electric buses are supported to strengthen public transport systems.
2. Electric two-wheelers and three-wheelers target mass adoption in urban and rural areas.
3. Emerging categories such as e-trucks and e-ambulances are included to expand the EV ecosystem.

Focus on Commercial and Public Use

1. Emphasis on commercial vehicles enhances impact on emissions reduction.
2. Public transport electrification improves urban mobility sustainability.

5.Significance of the Scheme

Environmental Benefits

1. EV adoption reduces greenhouse gas emissions and urban air pollution.
2. It contributes to India's climate commitments and net-zero goals.

Energy Security

1. Reduced dependence on fossil fuels lowers import bills and enhances energy independence.
2. Integration with renewable energy supports a sustainable energy mix.

Economic and Industrial Growth

1. The scheme promotes domestic manufacturing and innovation in EV technologies.
2. It generates employment across manufacturing, services, and infrastructure sectors.

Reduction in Range Anxiety

1. Expansion of charging infrastructure addresses a key barrier to EV adoption.
2. It improves consumer confidence and accelerates market penetration.

6.Complementary Government Initiatives

Production Linked Incentive Scheme

1. Encourages domestic manufacturing of advanced automotive technologies.
2. Promotes value addition and integration into global value chains.

India Semiconductor Mission

1. Supports development of semiconductor manufacturing essential for EV electronics.
2. Reduces dependence on imports.

Electric Mobility Index

1. Tracks state-level progress in EV adoption and infrastructure.
2. Encourages competitive federalism.

PM e-Bus Sewa Scheme

1. Supports deployment of electric buses with payment security mechanisms.
2. Strengthens public transport electrification.

7.Challenges in EV Adoption

High Initial Cost of EVs

1. Despite subsidies, EVs remain costlier than conventional vehicles.
2. Battery costs contribute significantly to overall pricing.

Infrastructure Gaps

1. Charging infrastructure is still inadequate in many regions.
2. Rural and semi-urban areas face greater challenges.

Supply Chain Constraints

1. Dependence on imported batteries and critical minerals creates vulnerabilities.
2. Limited domestic manufacturing capacity affects scalability.

Technological and Awareness Barriers

1. Lack of awareness and technical knowledge slows adoption.
2. Concerns about battery life and performance persist.

8.Way Forward

Strengthening Domestic Manufacturing Ecosystem

1. Promote local production of batteries and critical components.
2. Encourage research and development in advanced EV technologies.

Expanding Charging Infrastructure

1. Accelerate installation of public and private charging stations.
2. Integrate charging networks with renewable energy sources.

Policy Stability and Incentives

1. Ensure long-term policy certainty to attract investment.
2. Rationalise subsidies to balance fiscal sustainability and adoption.

Promoting Innovation and Skill Development

1. Invest in skill development for EV manufacturing and maintenance.
2. Encourage startups and innovation in EV technologies.

Conclusion

The PM E-DRIVE Scheme marks a significant step in India's transition to sustainable mobility. By combining demand incentives, infrastructure development, and industrial support, it addresses multiple dimensions of EV adoption. Continued policy support, technological advancement, and ecosystem development are essential to realise India's vision of a clean and resilient mobility future.

Source - <https://www.thehindu.com/news/national/government-revises-pm-e-drive-scheme-sets-new-deadlines-for-e-scooters-e-rickshaws/article70795591.ece>

