Challenges in Electric Vehicles Implementation

What is the issue?

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- Air pollution due to increasing vehicles has a surge in India, Electric vehicles are seen as better solution for this.
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- India need to address few structural challenges in implementing Electric vehicles.
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What is the status of air pollution in India?

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- A report attributed to air pollution estimated 6.5 million premature deaths globally, with 1.1 million being from India.
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- In urban India, emissions from motor vehicles are among the prime reasons.
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- In 2014, the World Health Organisation’s urban air quality database had found four Indian cities to be among the world’s 10 most polluted.
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- The database also placed 10 Indian cities in the 20 worst list.
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What are the plans of Indian government in this regard?

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- Union Minister for Power, said that from 2030, India would completely shift to using electric vehicles (EVs).
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- The push for electric mobility was backed by the government think-tank, NITI Aayog, which has estimated that the nation can save up to Rs. 4 lakh

crore by rapidly adopting EVs.
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- NITI Aayog lays stress on the need for a robust action plan to move towards electric mobility by 2030,
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What are the challenges in India’s Plan?

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- While transitioning from an internal combustion engine (ICE)-based regime to an EV-based one is expected to be a painful process.
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- EV plans involve several actors at the national, State and city levels, it needs multiple ministries such as Road Transport and Highways, Housing and Urban Affairs, Heavy Industries, Power, New and Renewable Energy, External Affairs as well as national institutes such as NITI Aayog.
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- The Infrastructures for the implementation of EVs like charging technology are yet in a slow phase.
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- In global trend one who controls the battery will control electric mobility, but India does not produce lithium-ion (Li-ion) batteries currently, and companies making battery packs are dependent almost exclusively on imports from China.
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- The absence of a standard global infrastructure is a major deterrent for EV penetration in India, as creating infrastructure can be cost-intensive.
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What measures needs to be taken?

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- Since the initial EV revolution would predominantly be an urban one, State and city-level players need to be involved so as to address several technical and infrastructural needs.
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- Sustained growth is possible only due to positive economic impacts of EVs, India need to ensure such possibilities.
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- Accelerating EV use in India should be linked to the “Make in India” goal and domestic battery production.
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- Investment is required for research and development in battery-making and exploring alternative technologies.
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- Government needs to select or develop appropriate charging technology that avoids multiplicity and reduces the cost of infrastructure, while making it convenient and safe for users.
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- India needs a road map, with timelines, processes, well-researched impact studies, bold initiatives and robust investments in technological research to turn its EV dream into reality.
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Source: The Hindu

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