

Why should India adopt electric vehicles?¹

Road transportation is a major contributor to India's carbon emissions

India's road transportation sector resulted in 265.7 million tonnes of CO₂ emissions in 2017

Adopting EVs has several co-benefits for India apart from reducing CO₂ emissions

IMPROVED AIR QUALITY

Indian cities will no longer be on the list of the most polluted cities in the world. Currently, 14 of 20 most polluted cities in the world are from India.

REDUCTION IN IMPORT DEPENDENCY

India imports about 84 per cent of its crude oil requirements. This resulted in a foreign exchange outflow of INR 869.46b in 2018 alone.²

REDUCE CARBON EMISSIONS

Cradle-to-grave studies on GHG emissions show that even when EVs are entirely dependent on coal-fired electricity the GHG emissions are less than those emitted by petrol or diesel vehicles.

TECHNOLOGY DEVELOPMENT

Increasing EV's penetration means higher supply in batteries and battery-related research. Advancement in battery technology and decreasing costs is a key to weaning India away from fossil fuels. EVs can also create off-peak demand and act as electricity storage devices.

LEADER IN GROWING GLOBAL MARKET

The EV industry can surpass ICE vehicle and fuel industry in job and GDP growth.

Unique features of the Indian transport sector which will benefit EV development

SMALLER, AFFORDABLE VEHICLES

82 per cent of India's transport sector comprises 2 and 3-wheelers. This makes the transition to EVs easier since the cost of transition (vehicle cost, battery size and charging costs) will be lower.

OVERCOMING RANGE ANXIETY

71 per cent of India's population travels less than 5 km/day. Only 15 per cent travels more than 10 kms/day. Average vehicle speed is less than 25kmph. This means smaller batteries in EVs and therefore lower vehicle cost.

MANAGING FUEL ECONOMY CONCERNS

The August 2020 amendments will help the EV industry develop battery swapping or leasing mechanisms. This will reduce the upfront cost of an EV, a major concern for Indian consumers.³

LONGER BATTERY LIFE

Slow charging of batteries can be the dominant mode of charging because of smaller ranges. This will help in ensuring longer battery life.

¹ A Guidance Document On Accelerating Electric Mobility In India.

https://wri-india.org/sites/default/files/Accelerating%20electric%20mobility%20in%20India_WRI%20India_CBEEIITM.pdf

² MoPNG. (2018). Indian Petroleum and Natural Gas Statistics 2017-18

³ <https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1645394>