GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4769
ANSWERED ON 21.08.2025

ADOPTION OF EV TO REDUCE CARBON EMISSIONS

4769. SHRI G KUMAR NAIK:

Will the Minister of POWER
be pleased to state:

(a) whether the Government is aware that approximately 76 percent of India's electricity generation in Financial Year 2023-24 comes from thermal power, mainly coal, potentially offsetting the environmental benefits of Electric Vehicles (EVs) due to high carbon emissions from electricity used for charging;

(b) if so, the measures taken/being taken by the Government to increase the share of renewable energy in India's electricity generation mix to ensure that EV adoption effectively reduces carbon emissions; and

(c) the steps being implemented to align the growth of the EV market with the expansion of renewable energy sources such as solar and wind to ensure that advancements in green energy infrastructure support the transition to EVs and reduce the transportation sector's carbon footprint?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : The Government is aware that coal-based power currently contributes the largest share in the country's electricity generation mix. India remains firmly committed to combating climate change while simultaneously ensuring energy security, affordability and accessibility as critical inalienable priorities to ensure growth and development alongside the energy transition of the economy towards achieving 'Net-Zero' emissions by 2070.

In its updated Nationally Determined Contribution (NDC) submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in August 2022, India has targeted to achieve about 50% of its cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030. As on 31.07.2025, the share of non-fossil fuel based installed capacity has become 50.25% of total installed generation capacity.

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With the steadily increasing share of RE in the Grid and promotion of clean and efficient energy technologies, there has been significant decrease of about 7% (from 0.78 kg / KWh in 2014-15 to 0.72 Kg / KWh in 2023-24) in average carbon emission intensity of grid electricity in India.

(b): Government has taken various steps/ measures to increase the share of renewable energy in India's electricity generation mix. The details of which are given at Annexure-I.

(c): Government has taken several steps to align the growth of the EV which are given at Annexure-II.

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ANNEXURE-I

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 4769 ANSWERED IN THE LOK SABHA ON 21.08.2025

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In order to increase the share of renewable energy in India's electricity generation mix, various steps/measures taken by government are as follows: -

(i) Ministry of New & Renewable Energy (MNRE) has issued Bidding Trajectory for issuance of RE power procurement bids of 50 GW/annum by Renewable Energy Implementing Agencies (REIAs) from FY 2023-24 to FY 2027-28.

(ii) Foreign Direct Investment (FDI) has been permitted up to 100 percent under the automatic route.

(iii) Inter State Transmission System (ISTS) charges have been waived for inter-state sale of solar and wind power for projects to be commissioned by 30th June 2025, for Green Hydrogen Projects till December 2030 and for offshore wind projects till December 2032.

(iv) To boost RE consumption, Renewable Purchase Obligation (RPO) followed by Renewable Consumption Obligation (RCO) trajectory has been notified till 2029-30. The RCO which is applicable to all designated consumers under the Energy Conservation Act 2001 will attract penalties on non-compliance. RCO also includes specified quantum of consumption from Decentralized Renewable Energy sources.

(v) Standard Bidding Guidelines for tariff based competitive bidding process for procurement of Power from Grid Connected Solar, Wind, Wind-Solar Hybrid and Firm & Dispatchable RE (FDRE) projects have been issued.

(vi) Schemes such as Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM), PM Surya Ghar Muft Bijli Yojana, National Programme on High Efficiency Solar PV Modules, New Solar Power Scheme (for Tribal and PVTG Habitations/Villages) under Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN) and Dharti Aabha Janjatiya Gram Utkarsh Abhiyan (DA JGUA), National Green Hydrogen Mission, Viability Gap Funding (VGF) Scheme for Offshore Wind Energy Projects have been launched.

(vii) Scheme for setting up of Solar Parks and Ultra Mega Solar Power projects is being implemented to provide land and transmission to RE developers for installation of RE projects at large scale.

(viii) Laying of new transmission lines and creating new sub-station capacity has been funded under the Green Energy Corridor Scheme for evacuation of renewable power.

(ix) "Strategy for Establishments of Offshore Wind Energy Projects" has been issued.

(x) To augment transmission infrastructure needed for steep RE trajectory, transmission plan has been prepared till 2032.

(xi) Green Term Ahead Market (GTAM) has been launched to facilitate sale of Renewable Energy Power through exchanges.

(xii) To achieve the objective of increased domestic production of Solar PV Modules, the Govt. of India is implementing the Production Linked Incentive (PLI) scheme for High Efficiency Solar PV Modules. This will enable manufacturing capacity of Giga Watt (GW) scale in High Efficiency Solar PV Module.

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ANNEXURE REFERRED IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 4769 ANSWERED IN THE LOK SABHA ON 21.08.2025

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The steps taken by Government to align the growth of the EV market are as below:

i. Ministry of Heavy Industries (MHI) has formulated following schemes to promote the adoption of Electric Vehicles:

- **PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme: PM E-DRIVE Scheme has been notified on 29th September 2024 for promotion of electric mobility and to reduce dependence of fossil fuels in the country. This scheme aims to incentivise sale of e-2W, e-3W, e-Trucks, e-Ambulances, and e-buses. The scheme also supports development of charging infrastructure and upgradation of vehicle testing agencies.**

- **Production Linked Incentive Scheme for Automobile and Auto Component Industry (PLI-Auto): Government on 15th September, 2021 approved PLI-Auto Scheme, for enhancing India's manufacturing capabilities for Advanced Automotive Technology (AAT) products.**

- **Production Linked Incentive (PLI) Scheme for manufacturing Advanced Chemistry Cells (ACC): Government on 12th May, 2021 approved PLI-ACC in order to promote manufacturing of ACC in the country. The scheme envisages to establish a cumulative ACC battery manufacturing capacity of 50 GWh.**

- **Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) scheme Phase-II (FAME-II): FAME-II was implemented for a period of 5 years w.e.f. 01st April, 2019. Under FAME-II, Phased Manufacturing Programme (PMP) was introduced with the objective of domestic manufacturing of electric vehicles, its assemblies/ sub-assemblies and parts/sub-parts thereby increasing the domestic value addition.**

- **PM e-Bus Sewa-Payment Security Mechanism (PSM) Scheme: This Scheme notified on 28th October, 2024 and aims to support deployment of more than 38,000 electric buses. The objective of scheme is to provide payment security to e-bus operators in case of default by Public Transport Authorities (PTAs).**

- **Scheme for Promotion of Manufacturing of Electric Passenger Cars in India (SPMEPCI): This scheme was notified on 15th March, 2024 to promote the manufacturing of electric cars in India.**

ii. Ministry of Power (MoP) has issued Guidelines for Installation and Operation of Electric Vehicle Charging Infrastructure-2024, dated 17th September, 2024, outline standards and protocols to create connected & interoperable EV charging infrastructure network which includes Battery Swapping/Charging stations.

iii. The following steps have been taken by Ministry of Road Transport and Highways (MoRTH) to promote adoption of Electric Vehicles (EVs) in the country:

- **Notification issued vide S.O. 5333(E) dated the 18th October, 2018, has granted exemption from the requirements of permit to the battery-operated transport vehicles.**

- **Notification issued vide G.S.R. 525(E) dated the 2nd August, 2021 has exempted Battery Operated Vehicles from the payment of fees for the purpose of issue or renewal of registration certificate and assignment of new registration mark.**

- **Notification issued vide G.S.R. 302(E) dated the 18th April, 2023 to issue All India Tourist Permit for battery operated vehicles without payment of any permit fee.**

- **Notification issued vide G.S.R. 167(E) dated the 1st March, 2019 for retro-fitment of hybrid electric system or electric kit to vehicles and their compliance standards shall be as per Automotive Industry Standards (AIS) 123.**

- **An advisory dated 12th August, 2020 has been issued to all States and UTs regarding sale and registration of two wheeled Electric Vehicles without batteries.**

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