

**GOVERNMENT OF INDIA
MINISTRY OF HOUSING AND URBAN AFFAIRS
LOK SABHA
UNSTARRED QUESTION NO.5420
TO BE ANSWERED ON APRIL 03, 2025**

ADVANCEMENT AND INNOVATIONS IN METRO SYSTEMS

NO. 5420. DR. KALANIDHI VEERASWAMY:

Will the Minister of HOUSING AND URBAN AFFAIRS be pleased to state:

- (a) the details of the recent advancements and innovations aimed to improve urban transport and enhance connectivity in metro systems across the country, State-wise including Tamil Nadu;**
- (b) the number of new metro projects initiated/under planning stages in Tamil Nadu along with their expected impact on urban mobility and congestion in major cities;**
- (c) the details of the technological improvements and modernizations being implemented in metro systems in Tamil Nadu to increase efficiency, sustainability and passenger comfort;**
- (d) the details of the funds allocated by the Government for expansion and development of the metro systems in Tamil Nadu along with the timeline fixed for their completion; and**
- (e) the steps taken/being taken by the Government to integrate metro systems with other modes of public transport in Tamil Nadu by ensuring seamless connectivity for passengers?**

ANSWER

**THE MINISTER OF STATE IN THE
MINISTRY OF HOUSING AND URBAN AFFAIRS
(SHRI TOKHAN SAHU)**

- (a) & (c) A number of advancements and technological innovations have taken place during the recent years in various Metro Rail operational in the country, improving efficiency, sustainability and passenger comforts. Some of the noteworthy technological advancements are:**

(i) Introduction of Namo Bharat Train- India's first State of Art Namo Bharat train with design speed of 180 kmph and operational speed of 160 kmph has been introduced on priority section between New Ashok Nagar to Meerut South Depot on Delhi- Meerut RRTS corridor;

(ii) European Train Control System (ETCS) – World’s first State of Art ETCS level II with Hybrid level-III radio based train signaling system on Long Term Evolution (LTE) backbone has been introduced on Namo Bharat trains running between New Ashok Nagar to Meerut South Depot on Delhi- Meerut RRTS corridor enhancing passenger safety to a new level.

(iii) Platform Screen Door (PSD) - For improved safety and to reduce the risk of accidents, PSD has been jointly developed by Bharat Electronics Limited (BEL) with National Capital Region Transport Corporation (NCRTC);

(iv) National Common Mobility Card (NCMC) – One Nation-One card i.e. NCMC work on all NCMC enabled transport systems in the country;

(v) QR based Ticketing – QR based ticketing system has facilitated booking of tickets from Mobile based apps;

(vi) Unmanned Train Operations (UTO) – For improved efficiency and quality of service including better utilization of resources, UTO is functional on Delhi Metro Rail Corporation;

(vii) Indigenous Automatic Train Supervision system (i-ATS) – India’s first Indigenously built Automatic Train Supervision System developed by the combined efforts of DMRC and Bharat Electronics Limited (BEL) has been implemented on Red Line of Delhi Metro.

Out of above technology improvements, National Common Mobility Card, QR based ticketing, platform screen doors etc. have been provided in Chennai Metro project. In addition, Chennai Metro Phase-2 has been planned for UTO operations.

(b), (d) & (e) Urban transport, which is an integral part of urban development, is a state subject. Hence, respective State Government/Union Territory (UT) is responsible for planning, initiating, integration of metro rail project with other modes of public transport and expansion of urban transport infrastructure. The Central Government considers financial assistance for such projects in cities or urban agglomerates, based on feasibility of the proposal and availability of resources, as and when posed by the concerned State Government/Union

Territory (UT). Central Government has sanctioned Chennai Metro Rail Phase-I and Phase-I Extension projects with 54 km route length at the sanctioned cost of ₹ 22,149.92 crores. Government of India has released the entire fund to the tune of ₹ 15,355.78 crores for Chennai Metro Phase-I including its extension and the projects are fully operational. Further, Central Government has approved Chennai Metro Phase-II project as 50:50 Joint Venture project at the cost of Rs 63,246.4 crore in October 2024. As per sanction order, total contribution from Government of India for Chennai Metro Rail Phase-2 project is ₹ 7,424.9 Cr towards Equity and Subordinate Debt. In addition, Central Government is also providing pass through assistance against the external loan as per sanction order. Central Government has released fund to the tune of Rs 5,554.15 crore for Chennai Metro phase-2 project since its sanction in the month of October 2024.
