

**GOVERNMENT OF INDIA  
MINISTRY OF HOUSING AND URBAN AFFAIRS  
LOK SABHA  
UNSTARRED QUESTION NO. 2044  
TO BE ANSWERED ON DECEMBER 11, 2025**

**PROGRESS AND MODERNISATION OF METRO RAIL AND RRTS**

**NO. 2044: SHRI SANATAN PANDEY:  
SHRI RAVINDRA DATTARAM WAIKAR:  
SHRI NARESH GANPAT MHASKE:  
SHRI SHRIRANG APPA CHANDU BARNE:  
SMT. BHARTI PARDHI:  
DR. SHRIKANT EKNATH SHINDE:**

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

- (a) whether the Government proposes to implement Public Private Partnership (PPP) model in Regional Rapid Transit Systems (RRTS) projects, if so the details thereof along with the name of corridors having participation of private investors;**
- (b) the details of the impact of PPP on the pace and financial sustainability of the projects;**
- (c) the total operational length of metro rail network and RRTS in the country along with the number of cities covered;**
- (d) the key technological advancements incorporated in metro systems, including the Nammo Bharat Train and European Train Control Signaling System;**
- (e) the details of smart ticketing initiatives such as National Common Mobility Card and QR-based ticketing;**
- (f) whether Unmanned Train Operations (UTO) have been implemented in metro systems, if so, the details thereof; and**
- (g) the details of the measures taken/being taken by the Government to enhance energy efficiency and sustainability in metro projects?**

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

- (a) & (b): At present, no Nammo Bharat Regional Rapid Transit System (RRTS) project is being fully implemented on PPP model. However, National Capital Region Transport Corporation (NCRTC) has informed that it has taken following initiatives for private sector participation in Delhi-Meerut Nammo Bharat RRTS corridor:**

- (i) Agreement with a Private operator for the comprehensive operation & maintenance of the corridor for a period of 12 years.**
- (ii) Agreement for comprehensive performance-based maintenance of trains to the manufacturer for a period of 15 years.**
- (iii) Procurement of Automatic Fare Collection system under PPP Hybrid Annuity model for a period of 10 years.**

**The above initiatives have facilitated a long-term predictability of O&M obligations and better financial planning.**
- (c): About 1083 Kms of Metro Rail lines (including 55 Kms of Delhi-Meerut Namo Bharat Regional Rapid Transit System) are operational in 25 different cities.**
- (d) to (f): A number of advancements and technological innovations have taken place during the recent years in various Metro/ RRTS systems operational in the country. Some of the noteworthy technological advancements including smart ticketing initiatives and Unmanned Train Operations (UTO) 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 signalling 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. At present, NCMC is functional in 11 Metro projects and 11 Bus Transport corporations. Further, PM-eBus Sewa Guidelines issued by the Ministry of Housing and Urban Affairs includes implementation of NCMC based Automatic Fare Collection System (AFCS) for bus operations in States/Cities;**
  - (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 utilisation of resources, UTO is functional on Pink Line and Magenta Line of the 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.**
- (g): Metro Rail projects are implemented with state of art energy efficient technology including deployment of rolling stock with regenerative braking system. Such deployment of energy efficient systems is resulting in huge power savings. Solar Power panels are also installed by Metro companies that help in reduction of Carbon Dioxide emissions. These steps contribute significantly in making metro projects efficient, sustainable and environment friendly.**

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