

**GOVERNMENT OF INDIA
MINISTRY OF COMMUNICATIONS
DEPARTMENT OF TELECOMMUNICATIONS**

**LOK SABHA
UNSTARRED QUESTION NO. 4009
ANSWERED ON 12TH AUGUST, 2026**

IMPLEMENTATION OF WHITE RABBIT TECHNOLOGY

4009. SHRI SRIBHARAT MATHUKUMILLI:

WILL the Minister of COMMUNICATIONS be pleased to state:

- (a) whether the 'One Nation, One Time' network proposes to be implemented in Andhra Pradesh across ports, power utilities, financial institutions, telecom infrastructure and digital banking networks and if so, the implementation timeline and funding support proposed and if so, the details thereof;
- (b) whether an assessment has been conducted on the readiness of critical infrastructure in Andhra Pradesh including Visakhapatnam Port to adopt the White Rabbit Technology-based Indian Standard Time synchronisation system and if so, the details thereof;
- (c) whether the Government proposes financial assistance or a dedicated scheme to enable States including Andhra Pradesh to upgrade legacy timing and synchronisation infrastructure and if so, the details thereof;
- (d) whether cybersecurity vulnerabilities arising from reliance on foreign GPS-based timing systems in critical infrastructure have been assessed and the mitigation measures proposed and if so, the details thereof; and
- (e) whether the economic and operational benefits expected for Andhra Pradesh particularly in digital payments, logistics, ports and industrial corridors have been estimated and if so, the details thereof?

ANSWER

**MINISTER OF STATE FOR COMMUNICATIONS AND RURAL DEVELOPMENT
(DR. PEMMASANI CHANDRA SEKHAR)**

(a) to (e): The Indian Standard Time (IST) Dissemination Project has been taken up by the Department of Consumer Affairs in collaboration with CSIR–National Physical Laboratory (NPL) and Indian Space Research Organisation (ISRO) under the vision of "One Nation, One Time" to establish a secure and indigenous framework for dissemination of Indian Standard Time across the country.

The project provides for dissemination of IST to critical sectors such as telecommunications, banking, financial markets, power, ports and other digital infrastructure through five Regional Reference Standard Laboratories (RRSLs).

A successful demonstration of secure dissemination of IST traceable to UTC (NPLI) using Precision Time Protocol (PTP) based White Rabbit Technology has been carried out, including validation with the National Stock Exchange (NSE), Chennai.

Adoption of the framework by user organisations, including those in Andhra Pradesh, is subject to operational requirements and implementation by the respective stakeholders. No separate scheme for providing financial assistance to States has been formulated under the project.

The indigenous time dissemination framework is designed to reduce dependence on foreign GNSS-based timing sources, strengthen cybersecurity, improve the reliability of critical infrastructure and support secure digital services. The project aims at providing long-term benefits for sectors such as digital payments, logistics, ports, telecommunications, power and industry across the country, including Andhra Pradesh.
