

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
UNSTARRED QUESTION NO. 2876
ANSWERED ON 05.08.2026

IMPACT OF SOLAR ENERGY ON EXISTING INFRASTRUCTURE

2876. SHRI JOYANTA BASUMATARY

Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

- (a) the details of the impact of household installed solar energy production on the existing infrastructure;
- (b) the details of the loss suffered or the cost incurred by distribution companies to absorb the household solar energy generation, State-wise;
- (c) the details of the expected investment required to reduce the loss caused to distribution companies due to leakage during transmission from installed household solar units to distribution companies;
- (d) whether the Government has any plans to integrate Artificial Intelligence Models within the energy framework of the country; and
- (e) if so, the details thereof including proposed projects, fund allocation and tentative timelines and if not, the reasons therefor?

ANSWER

THE MINISTER OF STATE FOR NEW & RENEWABLE ENERGY AND POWER

(SHRI SHRIPAD YESSO NAIK)

(a) to (c) Studies have indicated that solar power generated at tail end of LT distribution lines by installation of rooftop solar by households helps in reduction of distribution losses.

Further, electricity being a concurrent subject, supply and distribution of electricity to all consumers, is within the purview of the respective distribution utility which functions under the guidance of the respective State government and the State Electricity Regulatory Commission (SERC).

The impact of adoption of rooftop solar system on the network functioning and distribution losses is monitored by the distribution utility and the SERC concerned.

(d) & (e) The Ministry of Power, under the Revamped Distribution Sector Scheme (RDSS), has launched the Powerthon initiative to promote the adoption of advanced technologies, including Artificial Intelligence (AI) and Machine Learning (ML) based solutions, in the power distribution sector. Under the initiative, Technology Solution Providers (TSPs) have been selected through a rigorous multi-stage evaluation process and allocated to Distribution Companies (DISCOMs) for pilot implementation of AI/ML-based analytics solutions against identified problem statements in the Power sector.
