

**GOVERNMENT OF INDIA
MINISTRY OF POWER**

**LOK SABHA
UNSTARRED QUESTION NO.2849
ANSWERED ON 12.12.2024**

UNIFORM PROTECTION PROTOCOL

2849. DR. M P ABDUSSAMAD SAMADANI:

**Will the Minister of POWER
be pleased to state:**

- (a) the details of the Uniform Protection Protocol (UPP) prepared by the National Power Committee (NPC) including its key objectives and timelines for implementation;**
- (b) the specific measures outlined in the UPP to ensure grid stability and security in light of the target to integrate 450 GW renewable energy into the National Grid by 2030 and 2100 GW by 2047; and**
- (c) the current status and timeline for the transition to Five-Minute Interface Energy Meters and the deployment of the Advanced Metering Infrastructure (AMR) system across the country?**

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : Uniform Protection Protocol (UPP), prepared by National Power Committee (NPC), was approved in the 15th meeting of NPC held on 14.11.2024. The key objectives of UPP include proper co-ordination of protection system in order to protect the equipment/system from abnormal operating conditions, isolate the faulty equipment and avoid unintended operation of protection system.

The UPP is applicable to all Regional entities, State/Central/Private Generating Companies/ Generating Stations, State Load Dispatch Centers (SLDCs), Regional Load Dispatch Centers (RLDCs), Central Transmission Utility (CTU), State Transmission Utilities (STUs), Transmission Licensees and Regional Power Committees (RPCs), connected at 220 kV (132 kV for North Eastern Region) and above.

During 15th NPC meeting deliberations, all RPCs informed that they have already adopted the Uniform Protection Protocol and same is under implementation.

(b) : The Uniform Protection Protocol addresses the protection requirements for thermal and hydro generating units, renewable energy generations (REGs), battery energy storage system (BESS), substations, transmission lines, and HVDC terminals and also envisage the General Philosophy of Protection System which covers the Objective, Design Criterion fault clearance time, reliability, sensitivity and other details, which will be implemented uniformly and ensure grid stability and security in light of the target to integrate 450 GW renewable energy into the National Grid by 2030 and 2100 GW by 2047.

(c) : The Technical Specifications (TS) of Five Minutes Interface Energy Meters (IEMs) with Automatic Meter Reading (AMR) and Meter Data Processing (MDP) for the Interstate Transmission System (ISTS) has already been finalized. Action has been initiated for preparation of Detail Project Report (DPR) for deployment of Five Minutes IEMs with Advance Metering Infrastructure system at ISTS (Inter State Transmission System) level.
