

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.943
ANSWERED ON 27.07.2026

DELAY IN SMART METER INSTALLATION

943 SHRI S NIRANJAN REDDY:

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

- (a) whether Government has reviewed the implementation of smart metering under the Revamped Distribution Sector Scheme (RDSS);
- (b) whether it is a fact that against 20.33 crore sanctioned smart meters, only 5.44 crore meters had been installed as of January 2026;
- (c) if so, the reasons for the shortfall;
- (d) the State-wise progress achieved; and
- (e) the revised timeline for completion of the programme?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) to (e): Under Revamped Distribution Sector Scheme (RDSS), smart metering works for 19.79 crore consumers, 52.53 lakh Distribution Transformers (DTs) and 2.05 lakh feeders, totaling 20.33 crore smart meters, have been sanctioned based on the proposals submitted by the States/ distribution utilities. Till date 5.73 crore smart meters have been installed under the scheme. In addition, smart meters have been installed by States under their State plans/ other schemes. Overall, 7.24 crore smart meters have been installed across the country under various schemes. The State/ UT-wise details of smart metering works under RDSS are placed at **Annexure**.

Initially there were some delays in the implementation of smart metering works due to following reasons:

- i. Initial delays in issuing model Request for Proposal (RFP) as Smart Metering being new technological initiative, establishment of test bed and empanelment of vendors for smart metering works.
- ii. Delay in tendering and awarding of works. Few utilities required longer time period for obtaining board approval issuance of tender documents etc.
- iii. Delay in signing of Contract and Direct Debit Facility (DDF) agreement by utilities.
- iv. Few utilities faced challenges in implementation in Public Private Partnership (PPP) mode.
- v. Inadequate consumer engagement exercise.

Following steps have been taken to address these challenges and accelerate the installation of smart meters:

- i. Installation of smart meters in Government establishments and for commercial, industrial and high load consumers has been prioritised for demonstration of benefits to other consumers.
- ii. Various advisories/ Standard Operating Procedures have been issued by the Ministry, including incentivising consumers for prepaid meter installation through rebate in bills; no penalty on consumers based on maximum demand recorded by smart meters; mechanism for recovery of past arrears in easy instalments; and installation of check meters for enhancing confidence in the accuracy of smart meters, etc.
- iii. Consumer awareness programs by the distribution utilities, and the Advanced Metering Infrastructure Service Providers (AMISPs), including distribution of pamphlets, banners and awareness canopies at high footfall areas, and social media outreach.
- iv. Smart meter mobile apps available for tracking of consumption of electricity and for easy recharge.

Further, the implementation of smart metering works under RDSS is reviewed regularly. The works are monitored through the Nodal Agencies, namely Power Finance Corporation Ltd. (PFC) and REC Ltd., and an Inter-Ministerial Monitoring Committee headed by Secretary (Power) has been constituted to monitor their progress. At the State level, the Distribution Reforms Committee, chaired by the Chief Secretary of the respective State, oversees and monitors the implementation of the scheme. In addition, regular review meetings are held with the States/ distribution utilities and Advanced Metering Infrastructure Service Providers (AMISPs) to facilitate expeditious implementation of the sanctioned works. As a result, the works have picked up pace. The sunset date of the scheme is 31.03.2028.

ANNEXURE

ANNEXURE REFERRED IN REPLY TO PARTS (a) TO (e) OF UNSTARRED QUESTION NO. 943 ANSWERED IN THE RAJYA SABHA ON 27.07.2026

State/ UT-wise Smart Metering work details under RDSS (as on 30.06.2026)

Sl. No.	State/ UT	Total Meters Sanctioned	Total Meters Installed
1	Andaman & Nicobar Islands	84,835	-
2	Andhra Pradesh	59,19,344	32,79,798
3	Arunachal Pradesh	2,98,250	84,899
4	Assam	64,45,127	55,44,334
5	Bihar	26,07,153	23,02,379
6	Chhattisgarh	61,79,479	42,23,010
7	Delhi	3,521	-
8	Goa	7,50,356	32,231
9	Gujarat	1,67,87,587	52,01,496
10	Himachal Pradesh	28,41,908	10,06,060
11	Jammu and Kashmir	14,97,690	9,70,776
12	Jharkhand	13,62,044	7,76,466
13	Kerala	1,33,83,001	1,92,942
14	Madhya Pradesh	1,34,29,206	41,90,181
15	Maharashtra	2,40,04,866	1,29,73,051
16	Manipur	1,66,208	64,399
17	Meghalaya	4,72,743	-
18	Mizoram	2,92,081	61,220
19	Nagaland	3,23,878	57,337
20	Puducherry	4,07,052	95,481
21	Punjab	89,81,414	14,662
22	Rajasthan	1,47,36,692	47,58,801
23	Sikkim	1,48,542	98,359
24	Tamil Nadu	3,04,90,774	9,746
25	Tripura	5,62,870	3,00,387
26	Uttar Pradesh	2,85,26,730	97,53,753
27	Uttarakhand	16,49,684	6,39,980
28	West Bengal	2,10,35,262	7,00,182
Total		20,33,88,297	5,73,31,930

Note: As on 30.06.2026, 5.73 crore smart meters have been installed under RDSS and total 7.24 crore smart meters have been installed across the country under various schemes including RDSS.

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.944
ANSWERED ON 27.07.2026

GRID STABILITY AND ENERGY STORAGE

944 SHRI S NIRANJAN REDDY:

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

- (a) whether Government has assessed the adequacy of India's energy storage capacity to support the rapid integration of renewable energy into the national grid;
- (b) whether Government has taken note of the NITI Aayog 2026 Report's observation that large-scale deployment of Battery Energy Storage Systems (BESS) remains far below the level required for a renewables-dominated grid, making storage one of the biggest bottlenecks in India's clean energy transition;
- (c) whether any national storage target, along with year-wise capacity addition and financing plan, has been notified; and
- (d) if so, the details thereof, State-wise?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a), (c) & (d) : As per the National Electricity Plan (Generation) Gazette notified in May, 2023, the projected Battery Energy Storage System (BESS) installed capacity requirement by the year 2026-27 and 2031-32 are 8.68 Giga Watt (GW) / 34 Giga Watt hour (GWh) and 47.24 GW / 236 GWh respectively with an estimated investment of about Rs 3.49 lakh Crores by 2031-32.

The projected Pumped Storage Plant (PSP) installed capacity requirement by the year 2026-27 and 2031-32 are 7.45 GW / 47 GWh and 26.69 GW / 175 GWh respectively with an estimated investment of about Rs 1.29 lakh Crores by 2031-32.

(b) : NITI Aayog in its Report titled Sectoral Insights: Power (Vol. 7) released in February, 2026, has mentioned that Energy storage is going to emerge a critical requirement for managing the variability associated with RE integration. The Government has already undertaken a series of coordinated policy, regulatory, demand-side, and supply-side measures to promote the development and deployment of Energy Storage Systems (ESS), including BESS. The details of these measures are provided in the **Annexure**.

**ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 944
ANSWERED IN THE RAJYA SABHA ON 27.07.2026**

I. Policy and Regulatory Measures

1. The Electricity Rules were amended in December 2022 to explicitly recognize Energy Storage Systems (ESS) as an integral part of the power system, enabling their participation across generation, transmission and distribution functions.
2. In October 2022, ESS were included in the Harmonised Master List of Infrastructure of the Ministry of Finance, facilitating access to long-tenure and lower-cost financing.
3. In June 2023, the Government issued Guidelines for Preparation of Resource Adequacy Plans by State utilities, under which energy storage has been incorporated as a key planning resource for meeting peak demand and ensuring system reliability.
4. A National Framework for Promotion of Energy Storage Systems was issued in September 2023, providing a comprehensive roadmap for deployment, market integration and regulatory facilitation of storage technologies.
5. CEA (Measures Relating to Safety and Electric Supply) (First Amendment) Regulations, 2025 has been notified on 30.03.2026, which includes the safety requirements for BESS.
6. CEA's (Technical Standards for Construction of Electrical Plants and Electric Lines) Amendment Regulations, 2026 has been notified to specify the construction standards for BESS

II. Demand-Side Enablers and Market Development Measures

7. ISTS Charges Waiver: 100% waiver for BESS projects commissioned by June 2025 with 25% annual reduction in waiver thereafter and Hydro Pumped Storage Projects (PSP) projects wherein construction work is awarded by June 2028. For Co-located Battery Energy Storage Systems (BESS) projects, 100% ISTS charges waiver has been extended for the projects commissioned upto June 2028. For Co-located PSP projects, 100% ISTS charges waiver has been extended for the projects for which construction work is awarded by June 2028.
8. In January 2022, CERC allowed storage-based resources to provide ancillary services, including secondary and tertiary reserves, enabling ESS to support real-time grid balancing alongside conventional generators.
9. Tariff-Based Competitive Bidding (TBCB) Guidelines for procurement of BESS and PSPs are notified creating a transparent mechanism for large-scale storage procurement.
10. Under the Electricity (Rights of Consumers) Rules, 2020, amended in December 2022, consumers using diesel generator sets have been mandated to shift to cleaner backup solutions, including energy storage, within timelines specified by State Commissions.
11. Electricity supplied from BESS has been allowed to participate in the High-Price Day-Ahead Market, launched in March 2023, enabling storage to respond to peak price signals similar to gas-based generation.

12. Viability Gap Funding is provided for development of 43.8 GWh BESS capacity.

13. Closed loop off-stream PSP projects have been exempted from the requirement of concurrence by the Central Electricity Authority.

III. Supply-Side and Manufacturing-Focused Measures

14. The Ministry of Heavy Industries is implementing a Production-Linked Incentive (PLI) Scheme with an outlay of Rs 18,100 crore for establishing 50 GWh of Advanced Chemistry Cell manufacturing capacity, of which 10 GWh is earmarked for grid-scale stationary storage.

15. Enabling Infrastructure Support of ₹1.0 crore per MW for hydro PSP projects up to 200 MW has been provided. For projects exceeding 200 MW, support is provided at ₹200 crore plus ₹0.75 crore per MW.

16. CERC has allowed separate grid connectivity during non-solar hours, enabling additional renewable capacity at existing substations and facilitating storage-based shifting of power to evening and night hours.

17. Through amendment of the Electricity Rules in September 2025, energy storage systems have been permitted to be developed, owned, leased or operated by consumers, expanding the range of ownership and business models.

18. In February 2025, CEA issued an advisory on co-location of ESS with solar power projects, recommending storage capacity of at least 10% of installed solar capacity for a minimum duration of two hours, to improve dispatchability of solar power.

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.946
ANSWERED ON 27.07.2026

NATIONAL MISSION FOR ENHANCED ENERGY EFFICIENCY

946 SHRI GOLLA BABURAO:

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

- (a) whether Government is considering the launch of a new generation of the National Mission for Enhanced Energy Efficiency (NMEEE 2.0);
- (b) if so, the proposed timeline and the manner in which NMEEE 2.0 will be aligned with the Indian carbon market and other emerging market based mechanisms to scale up investments in energy efficient technologies; and
- (c) whether NMEEE 2.0 will include a dedicated window for MSMEs and small enterprises, particularly those operating in energy intensive sectors, if so, the details thereof?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): The National Mission for Enhanced Energy Efficiency (NMEEE) is one of the missions under the National Action Plan on Climate Change (NAPCC). It seeks to strengthen the market for energy efficiency through innovative policy and market-based mechanisms, including the Perform, Achieve and Trade (PAT) programme. At present, no proposal for a new generation of the National Mission for Enhanced Energy Efficiency (NMEEE 2.0) is under consideration in the Ministry of Power.

(b) & (c): The seven energy-intensive sectors such as Aluminium, Cement, Chlor-Alkali, Pulp & Paper, Petroleum Refinery, Petrochemicals and Textile covered under the PAT programme have been transitioned to the Indian Carbon Market (ICM) framework.

Further, for the energy-intensive Micro, Small and Medium Enterprises (MSMEs), Assistance for Deploying Energy Efficient Technologies in Industries and Establishments (ADEETIE) scheme has been launched in July 2025. The scheme handholds MSMEs operational in 60 clusters and 14 energy intensive sectors. It aims to facilitate Investment Grade Energy Audits (IGEA) to identify feasible technology interventions and provide financial support for implementation through interest subvention @ 5% for Small and Micro enterprises and 3% for Medium enterprises.

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.947
ANSWERED ON 27.07.2026

**IMPACT OF HYDROPOWER PROJECTS IN KISHTWAR
J AND K ON HOUSES/STRUCTURES**

947 SHRI SAJJAD AHMAD KICHLOO:

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

- (a) the number of houses/structures in Kishtwar district that have developed cracks or been rendered unsafe due to blasting, tunnelling and muck disposal for CVPPL/NHPC hydroprojects, village-wise, the compensation assessed and actually disbursed to affected families; and
- (b) whether environmental clearance conditions on muck disposal and blasting norms have been complied with and independently audited and whether forest land was diverted or damaged without requisite clearance?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): There is no information of any house / structure in Kishtwar district that has developed cracks or rendered unsafe due to blasting, tunnelling or muck disposal associated with the construction activities of NHPC Limited/ CVPPL hydroelectric projects.

(b): NHPC Limited/ CVPPL is complying with all Environmental Clearance conditions relating to muck disposal, blasting norms and other environmental safeguards for the hydroelectric projects. Six-monthly Environmental Clearance compliance reports are submitted to the Ministry of Environment, Forest and Climate Change (MoEF&CC). Further, no forest land has been diverted or utilized by NHPC Limited/ CVPPL without obtaining the requisite statutory clearance.

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.948
ANSWERED ON 27.07.2026

**SAFETY AUDITS ON HYDROELECTRIC POWER PROJECTS IN KISHTWAR,
J AND K.**

948 SHRI SAJJAD AHMAD KICHLOO:

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

- (a) the number of workers fatalities and serious injuries recorded at CVPPL/NHPC Hydroelectric Power projects sites going on in district Kishtwar during the last five years, project-wise detail along with the compensations paid to victim's families; and
- (b) whether statutory safety audits of tunnels and dam sites are conducted periodically by an independent authority and the details and findings of the last such audits?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): A total of 35 fatalities and 03 serious injuries have been reported during the last five years at NHPC Limited/CVPPL Hydro Electric Projects (HEPs) in Kishtwar district of the Union Territory of Jammu & Kashmir. The project-wise details are given below:

S. No.	Name of HEP	Fatalities		Serious injuries	
		(in number)	Compensation (in ₹)	(in number)	Compensation (in ₹)
1	PakalDul	16*	2,76,14,600	-	-
2	Kiru	08	1,20,21,968	-	-
3	Kwar	05*	29,43,375	3	35,30,727
4	Ratle	06	99,16,725	-	-

*For 2 cases in PakalDul HEP and 3 cases in Kwar HEP, compensation amount has been processed and will be disbursed after completion of the due process.

(b): The safety audits/ inspections of hydroelectric projects are carried out through independent agency. One such audit has been carried out by British Standards Institution (BSI) in the year 2024 for Kiru HEP reporting some minor non-compliance such as :

- Timely reporting of incidents/accidents to the Head Office,
- Training of drivers and operators before deploying at sites and periodic training,
- To have adequate stock of electrical resistance rubber mat,
- Strict compliance with PESO Act.

The corrective action plan suggested in the audit has been complied by the project.

Further, a Joint Safety Committee, comprising representatives of project developer and respective contractors, regularly reviews all safety-related aspects and monitors compliance with the safety requirements.

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.949
ANSWERED ON 27.07.2026

DRAFT NATIONAL ELECTRICITY POLICY 2026 & DISCOM REFORMS

949 # SHRI MANAN KUMAR MISHRA:
SHRI SADANAND MHALU SHET TANAVADE:
SHRI RAJIB BHATTACHARJEE:

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

- (a) whether Government has prescribed timelines for all State DISCOMS to submit local Resource Adequacy plans under the Draft National Electricity Policy (NEP) 2026 guidelines;
- (b) if so, the details thereof;
- (c) the specific benchmarks utilized to monitor the transition of State Transmission Utilities into independent transmission planning entities in the current financial year; and
- (d) the manner in which Government proposes to encourage DISCOMS to replace old thermal power plants for direct steam utilization in local industrial processes?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b) : Ministry of Power circulated the Draft National Electricity Policy (NEP), 2026 on 20.01.2026 for stakeholder consultation. The draft policy, inter alia, proposes a structured Resource Adequacy framework at the national, State, and distribution utility levels to ensure reliable 24x7 power supply. It proposes that the Central Electricity Authority (CEA), in consultation with the relevant State Government departments and other stakeholders, shall prepare national-level Resource Adequacy Plans (RAPs) for generation and transmission to ensure adequate reserve margins and grid reliability. State Load Dispatch Centres (SLDCs) and distribution licensees shall prepare Resource Adequacy Plans at the State and distribution utility levels, aligned with the national plans.

(c) : Draft NEP, 2026 proposes that, at the intra-State transmission level, the State Government should separate the functions currently performed by the State power transmission utility by establishing an independent entity to discharge the functions of the State Load Dispatch Centre (SLDC) and the State Transmission Utility (STU). The existing transmission utility would continue to function as the Transmission Service Provider (TSP). However, the Draft Policy does not prescribe any specific benchmarks for monitoring this transition.

(d) : Draft NEP, 2026 provides that existing coal-based thermal power plants should, wherever feasible, be retrofitted for flexible operation and integrated with energy storage systems to support the integration of variable renewable energy. It further proposes that steam generated from thermal power plants may be directly utilised for applications such as district cooling and industrial processes to improve system flexibility and facilitate greater integration of variable renewable energy.

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.950
ANSWERED ON 27.07.2026

IMPLEMENTATION OF SMART ELECTRICITY METERING UNDER RDSS

950 SHRI SANJAY SINGH:

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

- (a) current status of the rollout of smart electricity meters under the Revamped Distribution Sector Scheme (RDSS), indicating the number of smart meters sanctioned, installed and made operational against fixed targets and reasons for delays, if any State-wise and Union Territory-wise;
- (b) whether Government has received complaints regarding inaccurate billing, excessive charges, technical malfunctions, faulty meter readings or other consumer grievances relating to smart electricity meters during the last three years, if so, the details thereof; and
- (c) steps taken by Government to enhance transparency, consumer confidence and accountability in implementation of the smart metering programme?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): Government of India launched the Revamped Distribution Sector Scheme (RDSS) in July 2021 with the objective of improving the quality and reliability of power supply to consumers through a financially sustainable and operationally efficient distribution sector. Installation of smart meters for consumers and system (feeder and distribution transformer) metering is an important intervention under the scheme.

Under the scheme, smart metering works for 19.79 crore consumers, 52.53 lakh Distribution Transformers (DTs) and 2.05 lakh feeders, totaling 20.33 crore smart meters, have been sanctioned, based on the proposals submitted by the States/ distribution utilities. As on 30.06.2026, 5.73 crore smart meters have been installed under the scheme, comprising 5.53 crore consumer meters, 18.50 lakh DT meters and 1.85 lakh feeder meters. In addition, smart meters have also been installed by the States under their own State plans/ other schemes and, in total, 7.24 crore smart meters have been installed across the country. The State/ UT-wise details of smart metering works sanctioned and installed under RDSS as on 30.06.2026 are at **Annexure**.

Initially, there were some challenges in the implementation of smart metering works, which, inter alia, included time taken in tendering and award of works, sub-optimal consumer engagement, integration of the smart metering system with other digital systems of the distribution utilities, etc. Various steps have been taken to address these challenges, and the pace of installation has picked up significantly. The sunset date of the scheme is 31.03.2028.

(b) & (c): Electricity being a concurrent subject, supply and distribution of electricity to consumers is within the purview of the respective State Government/ distribution utility. Consumer grievances relating to metering and billing, including those relating to smart meters, are dealt with

by the concerned distribution utilities, which function under the guidance of the respective State Electricity Regulatory Commission and the State Government.

The distribution utilities provide internal grievance redressal mechanisms to resolve complaints related to metering, billing, etc. In addition, a multi-tier structure for Consumer Grievance Redressal Forums (CGRFs) has been established by the distribution utilities/ States as per the provisions of the Electricity (Rights of Consumers) Rules, 2020. If a consumer is dissatisfied with the resolution provided by the utility, the consumer may approach the CGRF and, thereafter, the Electricity Ombudsman, for resolution. The Electricity Regulatory Commissions are also required to notify standards of performance for the utilities in respect of consumer services.

Government of India has issued various advisories and Standard Operating Procedures (SOPs) to enhance transparency, consumer confidence and accountability in the implementation of the smart metering programme, which, inter alia, include the following:

- (i) Smart meters are required to adhere to the relevant technical and quality standards as per BIS (Bureau of Indian Standards) certification.
- (ii) Installation of check meters to verify the readings of smart meters on a random basis, and mandatory installation of check meters in case of consumer complaints.
- (iii) No penalty on consumers based on maximum demand recorded by smart meters, and a mechanism for recovery of past arrears in easy instalments.
- (iv) Incentivising consumers for prepaid meter installation through rebate in bills.
- (v) Smart meter mobile applications for near real-time consumption monitoring, convenience of recharge in small denominations, and advance alerts for low balance and emergency credit.
- (vi) Provisions for multiple recharge options, consumer feedback mechanisms, effective complaint resolution mechanisms and comprehensive consumer engagement campaigns.
- (vii) Prioritisation of installation of smart meters in Government establishments and for commercial, industrial and high load consumers for demonstration of benefits to other consumers.
- (viii) Consumer awareness programmes organised by the distribution utilities, and the Advanced Metering Infrastructure Service Providers (AMISPs), including distribution of pamphlets, banners and awareness canopies at high footfall areas, audio jingles in vernacular languages and social media outreach.

ANNEXURE

ANNEXURE REFERRED IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 950 ANSWERED IN THE RAJYA SABHA ON 27.07.2026

State/ UT-wise Smart Metering works under RDSS (as on 30.06.2026)

Sl. No.	State/ UT	Consumer Meters Sanctioned	Consumer Meters Installed	DT Meters Sanctioned	DT Meters Installed	Feeder Meters Sanctioned	Feeder Meters Installed	Total Meters Sanctioned	Total Meters Installed
1	Andaman & Nicobar Islands	83,573	-	1,148	-	114	-	84,835	-
2	Andhra Pradesh	56,08,846	31,35,016	2,93,140	1,33,766	17,358	11,016	59,19,344	32,79,798
3	Arunachal Pradesh	2,87,446	83,769	10,116	867	688	263	2,98,250	84,899
4	Assam	63,64,798	54,82,859	77,547	58,596	2,782	2,879	64,45,127	55,44,334
5	Bihar	23,50,000	20,93,830	2,50,726	2,02,386	6,427	6,163	26,07,153	23,02,379
6	Chhattisgarh	59,62,115	41,15,430	2,10,644	1,01,593	6,720	5,987	61,79,479	42,23,010
7	Delhi	-	-	766	-	2,755	-	3,521	-
8	Goa	7,41,160	28,629	8,369	2,775	827	827	7,50,356	32,231
9	Gujarat	1,64,87,100	50,17,480	3,00,487	1,84,016	-	-	1,67,87,587	52,01,496
10	Haryana	-	-	-	-	-	-	-	-
11	Himachal Pradesh	28,00,945	9,77,615	39,012	26,785	1,951	1,660	28,41,908	10,06,060
12	Jammu and Kashmir	14,07,045	9,36,905	88,037	32,419	2,608	1,452	14,97,690	9,70,776
13	Jharkhand	13,41,306	7,73,869	19,512	1,703	1,226	894	13,62,044	7,76,466
14	Kerala	1,32,89,361	1,74,871	87,615	15,130	6,025	2,941	1,33,83,001	1,92,942
15	Madhya Pradesh	1,29,80,102	39,56,106	4,19,396	2,06,561	29,708	27,514	1,34,29,206	41,90,181
16	Maharashtra	2,35,64,747	1,26,10,373	4,10,905	3,30,254	29,214	32,424	2,40,04,866	1,29,73,051
17	Manipur	1,54,400	62,244	11,451	1,917	357	238	1,66,208	64,399
18	Meghalaya	4,60,000	-	11,419	-	1,324	-	4,72,743	-
19	Mizoram	2,89,383	60,094	2,300	829	398	297	2,92,081	61,220
20	Nagaland	3,17,210	56,151	6,276	1,014	392	172	3,23,878	57,337
21	Puducherry	4,03,767	95,205	3,105	123	180	153	4,07,052	95,481
22	Punjab	87,84,807	-	1,84,044	2,099	12,563	12,563	89,81,414	14,662
23	Rajasthan	1,42,74,956	46,75,617	4,34,608	57,724	27,128	25,460	1,47,36,692	47,58,801
24	Sikkim	1,44,680	96,415	3,229	1,473	633	471	1,48,542	98,359
25	Tamil Nadu	3,00,00,000	-	4,72,500	-	18,274	9,746	3,04,90,774	9,746
26	Tripura	5,47,489	2,90,302	14,908	9,612	473	473	5,62,870	3,00,387
27	Uttar Pradesh	2,69,79,055	93,43,668	15,26,801	3,83,007	20,874	27,078	2,85,26,730	97,53,753
28	Uttarakhand	15,87,870	6,27,387	59,212	10,055	2,602	2,538	16,49,684	6,39,980
29	West Bengal	2,07,17,969	6,02,691	3,05,419	85,676	11,874	11,815	2,10,35,262	7,00,182
	Total (RDSS)	19,79,30,130	5,52,96,526	52,52,692	18,50,380	2,05,475	1,85,024	20,33,88,297	5,73,31,930

Note: As on 30.06.2026, 5.73 crore smart meters have been installed under RDSS and 7.24 crore smart meters have been installed across the country under various schemes including RDSS.

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.951
ANSWERED ON 27.07.2026

INCIDENTS OF THE FALLING HIGH-TENSION ELECTRIC POLES/WIRES

951 # SHRI NEERAJ DANGI:

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

- (a) the State-wise detail of complaints received regarding electric poles falling or high-tension wires snapping during the past two years;
- (b) the State-wise detail of the number of human and animal deaths caused by such incidents;
- (c) whether such incidents are a result of negligence on the part of officials, if so, the detail of actions taken against the concerned officials; and
- (d) the strict steps taken by Government for the regular inspection of electricity lines in order to prevent such accidents in the future?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) to (d):CEA (Measures relating to Safety and Electric Supply) Regulations, 2023, specify safety measures for construction, operation and maintenance of power stations, sub-stations, transmission and distribution lines. These regulations lay down the safety measures for electrical installations and provide for periodic inspection and testing of electrical installations. In addition, the CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022, contain specific provisions for strengthening of poles and wires in disaster prone areas and coastal areas to withstand severe environmental stress. Above Regulations are applicable to all entities who generate, transmit or distribute electricity.

As per information provided by the Chief Electrical Inspector of the respective states, on Electrical Accident Data Monitoring System (EADMS) portal maintained by CEA, the state-wise details of total number of fatalities caused by the snapping of electrical conductors are enclosed at **Annexure**.

Further, electricity is a concurrent subject and power distribution is handled by distribution utilities that function under the guidance of their respective State Electricity Regulatory Commissions (SERC) and State Governments. As per the Electricity Act, 2003, distribution of electricity is a licensed activity and it is the duty of the respective distribution licensee to develop and maintain an efficient and safe distribution system in its area of supply. Hence, the responsibility for taking necessary measures for the upgradation and maintenance of the distribution system and regularly checking the structural strength of poles and wires of High Tension (HT) and Low Tension (LT) lines to ensure quality and reliable power supply, rests with the respective distribution utilities, including taking action on complaints in this regard.

**ANNEXURE REFERRED IN REPLY TO PARTS (a) TO (d) OF UNSTARRED QUESTION
NO. 951 ANSWERED IN THE RAJYA SABHA ON 27.07.2026**

Number of electrical accident deaths due to snapping of conductors

Name of the State/UT	2024-2025		2025-2026	
	Human fatal	Animals fatal	Human fatal	Animals fatal
Andhra Pradesh	39	111	159	0
Arunachal Pradesh	0	1	0	1
Assam	17	27	18	44
Bihar	0	0	0	0
Chhattisgarh	20	110	0	0
Goa	0	0	0	5
Gujarat	17	182	21	169
Haryana	1	0	8	1
Himachal Pradesh	1	0	0	0
Jharkhand	7	19	16	31
Karnataka	64	187	59	197
Kerala	12	35	21	13
Madhya Pradesh	37	80	46	67
Maharashtra	72	637	103	954
Manipur	1	0	2	0
Meghalaya	2	0	0	0
Mizoram	1	0	1	0
Nagaland	0	0	0	0
Odisha	4	1	4	17
Punjab	1	0	0	0
Rajasthan	0	0	2	0
Sikkim	0	0	0	0
Tamil Nadu	33	140	34	113
Telangana	2	28	1	11
Tripura	5	12	0	12
Uttar Pradesh	216	307	163	102
Uttarakhand	1	4	4	21
West Bengal	9	14	6	11
Andaman and Nicobar Islands	0	0	0	0
Chandigarh	0	0	NR	NR
Dadra and Nagar Haveli and Daman and Diu	1	0	0	1
Delhi (National Capital Territory of Delhi)	1	0	3	0
Jammu and Kashmir	2	2	12	12
Ladakh	0	0	0	0
Lakshadweep	0	0	0	0
Puducherry	0	2	0	0
Total	566	1899	683	1782

NR- Not Received from State/UT

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.952
ANSWERED ON 27.07.2026

DOMESTIC BATTERY MANUFACTURING AND ENERGY STORAGE

952 # SMT. DARSHANA SINGH:

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

- (a) the steps taken by Government to promote domestic manufacturing for Battery Energy Storage Systems (BESS);
- (b) whether the provision of new financial assistance has been made to encourage private investment in energy storage projects;
- (c) the improvements that are expected in grid reliability and utilization of renewable energy as a result; and
- (d) key targets of Government for the year 2026-27?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : The Ministry of Heavy Industries administering the Production Linked Incentive (PLI) scheme, namely "**National Programme on Advanced Chemistry Cell (ACC) Battery Storage**," approved in May 2021 with a total outlay of ₹18,100 crore to establish 50 GWh of domestic Advanced Chemistry Cell manufacturing capacity. Out of the total targeted capacity of 50 GWh, 10 GWh capacity has been specifically earmarked for Grid Scale Stationary Storage and remaining 40 GWh is end use agnostic and may be utilized for any application including Electric Vehicle and Battery Energy Storage Systems (BESS). The Scheme aims to reduce India's dependence on imported ACCs by strengthening domestic manufacturing capabilities and incentivising domestic and international players to establish a globally competitive ACC battery-manufacturing ecosystem in the country.

Additionally, for promoting domestic manufacturing of BESS, Ministry of Power, under its existing Viability Gap Funding (VGF) Scheme supported through the Power System Development Fund (PSDF), has mandated a minimum local content of 20% of the total project cost for BESS. This minimum local content requirement includes indigenously developed Energy Management System (EMS) software.

(b) : Ministry of Power is implementing two Viability Gap Funding (VGF) Schemes for the development of 43.8 GWh of Battery Energy Storage Systems (BESS), with a total financial support of ₹9,160 crore. Under both the schemes, VGF is extended to private and public sector entities.

- 2 -

Further, to encourage the development of Pumped Storage Projects (PSPs), the Government is providing enabling infrastructure support of ₹1.0 crore per MW for projects up to 200 MW. For projects exceeding 200 MW, support is provided at ₹200 crore plus ₹0.75 crore per MW to private and public sector entities.

(c) : Energy Storage Systems (ESS) can play a vital role in meeting peak electricity demand and ensuring grid reliability by storing electricity during periods of low demand or high renewable energy generation and supplying it during periods of peak demand. ESS enables time-shifting of energy, enhances grid flexibility, improves the integration of renewable energy and reduces dependence on expensive peak power. Distribution licensees and grid operators can utilize ESS for peak load management, demand-supply balancing and ensuring reliable and quality power supply to consumers.

(d) : As per the National Generation Adequacy Plan issued by the Central Electricity Authority (CEA) in March 2026, the estimated requirement of energy storage system for 2026–27 is 6 GW/24GWh of BESS and 5 GW/27 GWh of PSP.

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.953
ANSWERED ON 27.07.2026

POWER SUPPLY VIZ-A-VIZ DEMAND

953 SHRI SANDOSH KUMAR P:

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

- (a) the peak electricity demand and peak demand met in the country during each of the last five years, year-wise;
- (b) the present installed power generation capacity, source-wise, including thermal, hydro, nuclear and renewable energy;
- (c) whether Government has assessed the country's power generation requirements over the next ten years in view of increasing industrialisation, urbanisation and electrification, if so, the details thereof;
- (d) the measures taken to strengthen transmission infrastructure and prevent power shortages during periods of peak demand; and
- (e) the steps taken by Government to ensure an affordable, reliable and sustainable electricity supply across the country?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

- (a):** The details of peak electricity demand and peak demand met in the country during each of the last five financial years is given at **Annexure-I**.
- (b):** Present installed generation capacity of the country is 5,48,858 MW. The source-wise details including thermal, hydro, nuclear and renewable energy are given at **Annexure-II**.
- (c):** Electric Power Survey (EPS) of the country is conducted every five years for estimating the electricity demand of the country, as obligated under Section 73(a) of the Electricity Act-2003. As per midterm review of 20th Electric Power Survey (EPS), the detail of peak demand and energy requirement up to 2034-35 in view of increasing industrialisation, urbanisation and electrification is given at **Annexure-III**.
- (d) & (e):** The Government has taken following measures to prevent power shortages including strengthening of transmission infrastructure during periods of peak demand to ensure an affordable, reliable and sustainable electricity supply across the country:

1. Generation and Storage Planning:

- (i) As per National Electricity Plan (NEP), installed generation capacity in 2031-32 is likely to be 874 GW. With a view to ensure generation capacity remains ahead of projected demand, all the States, in consultation with CEA, have prepared their "Resource Adequacy Plans (RAPs)", which are dynamic 10-year rolling plans and includes power generation as well as power procurement planning.

- (ii) All the States were advised to initiate process for creating/ contracting generation capacities; from all generation sources, as per their Resource Adequacy Plans.
- (iii) In order to augment the power generation capacity, the Government of India has initiated following capacity addition programme:

(a) Thermal Capacity Addition: The projected thermal (coal and lignite) capacity requirement by the year 2035–36 is estimated at approximately 3,15,000 MW as against the 2,11,855 MW installed capacity as on 31.03.2023. To meet this requirement, Ministry of Power has envisaged to set up an additional minimum 1,05,000 MW coal and lignite based thermal capacity.

Further, following initiatives have also been undertaken: -

Thermal capacities of around 21,080 MW have been commissioned since April 2023 till 30.06.2026. In addition, 47,545 MW of thermal capacity (including 4,845 MW of stressed thermal power projects) is currently under construction. The contracts of 16,000 MW have been awarded and are due for construction.

(b) Hydro Capacity Addition: 13,373 MW of Hydro Electric Projects are under construction. 16,448 MW of Hydro Electric Projects are under various stage of planning/ construction and targeted to be completed by 2031-32.

(c) Nuclear Capacity Addition: 8,000 MW of Nuclear Capacity is under construction and targeted to be completed by 2031-32. 5,600 MW of Nuclear Capacity is under various stages of planning and approval.

(d) Renewables Capacity Addition: 1,47,720 MW Renewable Capacity including 119,580 MW of Solar (including Hybrid-Solar) and 27,720 MW of Wind (including Hybrid-wind) is under construction while 47,830 MW of Renewable Capacity including 44,440 MW of Solar is at various stages of planning and targeted to be completed by 2029-30.

(e) Addition of Energy Storage Systems: As on 30.06.2026, 15,870 MW/95,220 MWh Pumped Storage Projects (PSPs) are under construction. Further, a total of 6,580 MW/39,480 MWh capacity of Pumped Storage Projects (PSPs) are concurred and yet to be taken up for construction. As on 30.06.2026, 15,754 MW / 42,530 MWh Battery Energy Storage System (BESS) capacity are under construction, 11,747 MW / 38,425 MWh has been awarded and 19,192 MW / 67,574 MWh BESS capacity are under tendering stage.

2. Promotion of Renewable Energy Generation:

- (i) 100% Inter State Transmission System (ISTS) charges have been waived for inter-state sale of solar and wind power for projects to be commissioned by 30th June 2025 (with waiver tapering off 25% annually till June 2028), for co-located BESS projects commissioned by June 2028, for Hydro PSP projects where construction work awarded by June 2028, for Green Hydrogen Projects commissioned till December 2030 and for offshore wind projects commissioned till December 2032.
- (ii) Standard Bidding Guidelines for tariff based competitive bidding process for procurement of Power from Grid Connected Solar, Wind, Wind-Solar Hybrid and Firm & Dispatchable RE (FDRE) projects have been issued.
- (iii) Renewable Energy Implementing Agencies (REIAs) are regularly inviting bids for procurement of RE power.

- (iv) Foreign Direct Investment (FDI) has been permitted up to 100 percent under the automatic route.
- (v) To augment transmission infrastructure needed for steep RE trajectory, transmission plan has been prepared till 2032.
- (vi) Laying of new intrastate transmission lines and creating new sub-station capacity has been supported under the Green Energy Corridor Scheme for evacuation of renewable power.
- (vii) Scheme for setting up of Solar Parks and Ultra Mega Solar Power projects is being implemented to provide land and transmission to RE developers for installation of RE projects at large scale.
- (viii) Schemes such as Pradhan Mantri KisanUrja Suraksha evamUtthaanMahabhiyan (PM-KUSUM), PM Surya Ghar Muft Bijli Yojana, National Programme on High Efficiency Solar PV Modules, New Solar Power Scheme (for Tribal and PVTG Habitations/Villages) under Pradhan Mantri Janjati Adivasi Nyaya MahaAbhiyan (PM JANMAN) and DhartiAabhaJanjatiya Gram UtkarshAbhiyan (DA JGUA), National Green Hydrogen Mission, Viability Gap Funding (VGF) Scheme for Offshore Wind Energy Projects have been launched.
- (ix) To encourage RE consumption, Renewable Purchase Obligation (RPO) followed by Renewable Consumption Obligation (RCO) trajectory has been notified till 2029-30. The RCO which is applicable to all designated consumers under the Energy Conservation Act, 2001 will attract penalties on non-compliance.
- (x) “Strategy for Establishment of Offshore Wind Energy Projects” has been issued.
- (xi) Green Term Ahead Market (GTAM) has been launched to facilitate sale of Renewable Energy Power through exchanges.
- (xii) Production Linked Incentive (PLI) scheme has been launched to achieve the objective of localization of supply chain for solar PV Modules.

3. **Transmission:**

Inter and Intra-State Transmission System has been planned and implementation of the same is taken up in matching time frame of generation capacity addition. As per the National Electricity Plan, about 1,91,474 ckm of transmission lines and 1,274 GVA of transformation capacity is planned to be added (at 220 kV and above voltage level) during the ten-year period from 2022-23 to 2031-32.

In addition to the above, the Ministry of Power has issued guidelines dated 14.06.2024, 21.03.2025 and 15.12.2025 regarding the payment of compensation for Right of Way (RoW) for transmission lines, wherein the land rate has been linked to the prevailing market rate. These guidelines address the key challenges of RoW arising from landowners demanding higher compensation than the rates determined by the State Government

4. **Distribution Sector:**

Government of India has supplemented the efforts of the States earlier through schemes like Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS), Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) and currently under Revamped Distribution Sector Scheme (RDSS), to help them achieve the objective of providing quality and reliable supply of power.

Government of India launched RDSS in July 2021 with the objective of improving the quality and reliability of power supply to consumers through a financially sustainable and operationally efficient distribution Sector. The scheme has an outlay of Rs. 3,03,758 Cr. and estimated Gross Budgetary Support (GBS) from Central Government of Rs. 97,631 Cr. Under the scheme, financial assistance is being provided to the Distribution Utilities (excluding Private Sector Utilities) for loss reduction infrastructure works and smart metering works. Projects worth Rs. 1.53 lakh crore for loss reduction infrastructure and Rs. 1.31 lakh crore for smart metering works have been sanctioned under the scheme which would help improve the reliability and quality of power supply in the country.

In addition to above, to support the power distribution utilities to improve their Aggregate Technical and Commercial (AT&C) losses some of the key initiatives taken, in addition to RDSS, are as under:

- (i) Additional Borrowing consent of 0.5% of Gross State Domestic Product (GSDP) to State Governments, which is conditional on them undertaking specific reforms in the power sector.
- (ii) Additional Prudential Norms for sanctioning of loans to State owned power utilities contingent on the performance of power distribution utilities against prescribed conditions.
- (iii) Rules for implementation of Fuel and Power Purchase Cost Adjustment (FPPCA) and cost reflective tariff so as to ensure that all prudent cost for supply of electricity is passed through.
- (iv) Rules and Standard Operating Procedure issued for proper subsidy accounting and their timely payment.

With the concerted efforts of Central and State Government, the average hours of supply in rural areas have increased from 12.5 hours in FY 14 to 22.6 hours in FY 26 and in urban areas the same has increased from 22.1 hours in FY 14 to 23.4 hours in FY 26.

ANNEXURE-I**ANNEXURE REFERRED IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 953
ANSWERED IN THE RAJYA SABHA ON 27.07.2026**

The details of peak electricity demand and peak demand met in the country during each of the last five financial years:

Year	Peak Demand	Peak Met	Demand Not Met	
	(MW)	(MW)	(MW)	%
2021-22	203,014	200,539	2,475	1.2
2022-23	2,15,888	2,07,231	8,657	4.0
2023-24	2,43,271	2,39,931	3,340	1.4
2024-25	2,49,856	2,49,854	2	0.0
2025-26	2,45,444	2,45,416	28	0.0
2026-27 (till June 2026)	2,70,832	2,70,820	12	0.0

ANNEXURE-II

**ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 953
ANSWERED IN THE RAJYA SABHA ON 27.07.2026**

The source-wise detail of installed generation capacity:

Installed Capacity (in MW) of the country as on 30.06.2026			
Category	Sources	Installed Capacity (MW)	% Share in Total
Fossil Fuel	Coal	2,24,158	40.84%
	Lignite	6,620	1.21%
	Gas	20,122	3.67%
	Diesel	589	0.11%
	Total Fossil Fuel	2,51,489	45.82%
Non-Fossil Fuel	RES (including Hydro)	2,88,589	52.58%
	Hydro (including PSPs)	52,065	9.49%
	Wind, Solar & Other RE	2,36,525	43.09%
	Wind	57,443	10.47%
	Solar	1,62,152	29.54%
	BM Power	10,869	1.98%
	Waste to Energy	878	0.16%
	Small Hydro	5,182	0.94%
	Nuclear	8,780	1.60%
	Total Non-Fossil Fuel	2,97,369	54.18%
	Total Installed Capacity	5,48,858	100.0%

ANNEXURE-III

**ANNEXURE REFERRED IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 953
ANSWERED IN THE RAJYA SABHA ON 27.07.2026**

The details of peak demand and energy requirement up to 2034-35:

Year	Projected Peak Electricity Demand (GW)	Energy Requirement (BU)
2026-27	289	1,929
2027-28	305	2,072
2028-29	325	2,227
2029-30	345	2,388
2030-31	364	2,546
2031-32	388	2,703
2032-33	407	2,874
2033-34	427	3,045
2034-35	446	3,215

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.954
ANSWERED ON 27.07.2026

**ELECTRICAL FIRE PREVENTION AND RESIDENTIAL SAFETY AUDIT
FRAMEWORK**

954 DR. AJEET MADHAVRAO GOPCHADE:

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

- (a) whether Government is aware of the recurring fire tragedies across the country, including the tragic fire incident in Delhi's Vivek Vihar resulting in the loss of innocent lives;
- (b) whether Government has assessed the contribution of overloading and ageing wiring, to fire accidents;
- (c) whether Government reviewed the effectiveness of the existing mechanism for inspection of consumer electrical installations under the Central Electricity Authority Regulations;
- (d) whether Government proposes to introduce mandatory periodic third-party electrical safety inspection; and
- (e) whether Government proposes to establish a digital reporting and compliance mechanism for electrical safety inspections, if so, the details thereof?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b): The Government is aware of electrical fire incidents reported in different parts of the country, including the unfortunate incident at Vivek Vihar, Delhi. Such incidents may occur due to various reasons including inadequate maintenance, non-compliance with safety regulations, poor-quality electrical equipment, ageing or overloaded wiring, and lack of awareness.

(c): In accordance with the provisions of Sections 53(a) and 177(2)(b) of the Electricity Act, 2003, Central Electricity Authority (CEA) notified the CEA (Measures relating to Safety and Electric supply) Regulations, 2010, as amended from time to time, to ensure electrical safety. CEA, after consultations with State Governments and other stakeholders, on 8th June, 2023, replaced these regulations by the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2023. The provisions of these Regulations are discussed with State Governments on regular basis through meetings, conferences, and seminars. Advisories are also issued to State Governments with the objective of enhancing electrical safety.

The Bureau of Indian Standards (BIS) has also issued standards, including IS 732 (Code of Practice for Electrical Wiring Installations), IS 3043 (Code of Practice for Earthing), and the National Electrical Code, 2023, to promote safe electrical installation practices. In addition, the Ministry of Commerce and Industry has notified Quality Control Orders for specified electrical wires and household electrical appliances to ensure compliance with prescribed quality standards.

(d): CEA Safety Regulations, while promoting the principles of ease of living and doing business, require periodic self-certification of electrical installations up to the notified voltage by the owner or consumer. The Appropriate Government shall decide voltage level and periodicity. However, the owner or consumer has the option to get his installation inspected and tested by an Electrical Inspector of the Appropriate Government. It is also provided that the owner or consumer may take assistance of Chartered Electrical Safety Engineer (CESE), authorized by the Appropriate Government for periodic self-certification.

(e): A digital reporting and compliance mechanism for electrical safety inspections of Central Government installations is already operational through the National Single Window System (NSWS) portal. The portal enables online submission and processing of applications and facilitates monitoring of compliance with electrical safety requirements for Central Government installations.

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.955
ANSWERED ON 27.07.2026

ELECTRICITY DEMAND IN NORTH EASTERN REGION

955 SHRI PRAMOD BORO:

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

- (a) whether Government has undertaken any assessment of the power demand requirement of Assam upto the year 2030, if so, findings thereof, if not, the reasons therefor;
- (b) details regarding the methodology and assumptions used for such demand projections, including factors relating to population growth, industrial expansion, urbanisation and electrification targets;
- (c) details regarding the current power demand and supply in the State of Assam, including peak demand and available capacity; and
- (d) details regarding ongoing power projects planned to be completed before 2030, including their current status, the name of the authority or company managing the project, and power generation capacity?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): As per midterm review of 20th Electric Power Survey (EPS) conducted by Central Electricity Authority (CEA), the estimated energy requirement and peak demand of Assam from FY 2026-27 to 2029-30 is given at **Annexure-I**.

(b): Electric Power Survey (EPS) of the country is conducted every five years for estimating the electricity demand of the country, as obligated under Section 73(a) of the Electricity Act-2003. It covers State / Union Territory wise, region-wise & all India electricity demand forecast on short, medium and long term. Two statistical methods i.e Econometric Method and Partial End Use Method (PEUM) has been adopted.

In the PEUM method, apart from general growth trends assessed from the past data, the likely impacts of various emerging aspects and government initiatives/policies such as energy efficiency measures, penetration of electric vehicles, solar roof top, National Hydrogen Mission, PM KUSUM Yojna etc. have also been factored in while assessing the electricity demand in future. Yearly electricity demand projection under PEUM method has been done for different consumer categories viz domestic, commercial, irrigation, industries, public water works, public lighting, Railways etc., for DISCOMs/ State/ UTs/ Regions and for the country. The forecast has been prepared in consultation with all concerned power utilities and their mutual consensus.

In Econometric Method, besides the past electricity consumption data, parameters such as Gross Domestic Product (GDP), rainfall, temperature etc are also taken into account.

(c): The details of Power Supply Position for the State of Assam in terms of Energy requirement/ Energy Supplied and Peak demand/ peak demand met (available capacity) for last three financial years and the current year (upto June, 2026) is given at **Annexure-II**.

(d): In the North Eastern Region (including Assam), six Hydroelectric Power Projects (HEPs), with a combined installed capacity of 2,166 MW, are currently under implementation and are scheduled to be commissioned on or before 31 December 2030. The latest physical progress of these projects (as on 30 June 2026) along with the name of project, executing agency/ company and the proposed installed generation capacity of each project, is given at **Annexure-III**.

ANNEXURE-I

**ANNEXURE REFERRED IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 955
ANSWERED IN THE RAJYA SABHA ON 27.07.2026**

Estimated energy requirement and peak demand of Assam from FY 2026-27 to 2029-30:

FY	Energy Requirement [Million Unit (MU)]	Peak Demand [Mega Watt (MW)]
2026-27	14,978	2,914
2027-28	15,972	3,068
2028-29	17,056	3,235
2029-30	18,162	3,403

ANNEXURE-II**ANNEXURE REFERRED IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 955
ANSWERED IN THE RAJYA SABHA ON 27.07.2026**

The details of Power Supply Position for the State of Assam in terms of Energy requirement/ Energy Supplied and Peak demand/ peak demand met (available capacity) for last three financial years and the current year (upto June, 2026):

Financial Year	Energy [Million Unit (MU)]				Peak [Mega Watt (MW)]			
	Energy Requirement	Energy Supplied	Energy not Supplied		Peak Demand	Peak Demand Met	Demand Not Met	
	(MU)	(MU)	(MU)	(%)	(MW)	(MW)	(MW)	(%)
2023-24	12,445	12,341	104	0.8	2,413	2,413	0	0.0
2024-25	12,843	12,837	6	0.0	2,812	2,687	125	4.4
2025-26	13,616	13,615	1	0.0	2,812	2,812	0	0.0
2026-27 (upto June, 2026)	3,531	3,521	9	0.3	2,683	2,658	25	0.9

(*) Data for the month of June, 2026 is Provisional

**ANNEXURE REFERRED IN REPLY TO PART (d) OF UNSTARRED QUESTION NO. 955
ANSWERED IN THE RAJYA SABHA ON 27.07.2026**

The details of power projects under implementation in North Eastern Region anticipated to be commissioned before 31.12.2030:

Sl. No.	Name of Power Project and Executing Agency	State	Location (District)	Proposed Installed Capacity (No. of units x capacity in MW)	Capacity Under Execution (MW)	Physical Progress (in %)
A. Arunachal Pradesh						
1	Subansiri Lower HEP, NHPC ^{\$}	Arunachal Pradesh / Assam	Lower Subansiri, Ar. Pradesh / Dhemaji, Assam	4x250	1,000	97.84
2	HEO HEP, NEEPCO*	Arunachal Pradesh	West Siang	3x80	240	6.33
3	Tato-I HEP, NEEPCO*	Arunachal Pradesh	Shi-Yomi	3x62	186	5.10
Sub-total					1,426	
B. Assam						
4	Lower Kopili HEP, APGCL#	Assam	Dima Hasao&Kar biAnglong	2x55+2x2.5+1x5	120	98.65
Sub-total					120	
C. Sikkim						
5	Teesta St. VI HEP, NHPC ^{\$}	Sikkim	South Sikkim	4x125	500	73.48
6	Rangit-IV HEP, NHPC ^{\$}	Sikkim	West Sikkim	3x40	120	97.34
Sub-total					620	
Total					2,166	

Legend:

* NEEPCO: North Eastern Electric Power Corporation Ltd

\$ NHPC: National Hydro Electric Project Corporation.

APGCL: Assam Power Generation Corporation Ltd

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.956
ANSWERED ON 27.07.2026

**POWER DEMAND PROJECTIONS, GRID INFRASTRUCTURE AND CAPACITY
EXPANSION**

956 DR. SANTRUPT MISRA:

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

- (a) the projected year-on-year growth in peak power demand, including the additional load anticipated from artificial-intelligence data centres, and whether captive or renewable capacity serving such centres will be connected to the grid;
- (b) whether investment in grid modernisation and transmission is keeping pace with investment in generation capacity, the details thereof;
- (c) whether investment in coal- and gas-based capacity is presently growing faster than renewable capacity; and
- (d) the steps being taken to ensure inter-ministerial coherence in the country's power strategy?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): Electric Power Survey (EPS) of the country is conducted by Central Electricity Authority (CEA) every five years for estimating the electricity demand of the country, as obligated under Section 73(a) of the Electricity Act-2003. As per midterm review of 20th Electric Power Survey (EPS), the detail of peak demand along with year-on-year growth up to FY 2031-32 in view of increasing industrialisation, urbanisation and electrification is given at **Annexure**. Further, an additional load of 26.3 GW from Artificial Intelligence (AI) Data Centres is projected by 2031-32, which is expected to be integrated into the grid and primarily served by renewable energy capacity.

(b): Development of transmission infrastructure is being undertaken in a phased manner, commensurate with the growing electricity demand and planned generation capacity addition, including renewable energy. The National Electricity Plan envisages development of the transmission system with an estimated investment of about ₹9,16,142 crore during the plan period (2022-32).

Grid modernization measures, including deployment of Static Synchronous Compensator (STATCOMs), Battery Energy Storage Systems (BESS), Synchronous Condensers and other advanced grid support technologies are also being planned to enhance grid reliability, flexibility and facilitate integration of renewable energy.

Further, currently, 154 Inter-State Transmission System (ISTS) projects are under construction in the country consisting of 39,792 ckm of transmission lines and 4,01,510 MVA of transformation capacity. Similarly, Intra State Transmission System (InSTS) projects (220 KV & above) comprising of 30,387 ckm of transmission lines and 1,18,194 MVA of transformation capacity are under construction in the country.

(c): As per Section 7 of Electricity Act, 2003 setting up of a power plant is a de-licensed activity in the country. Any generating company may establish, operate and maintain a generating station without requiring a license under Electricity Act, 2003 if it complies with the technical standards relating to connectivity with the grid.

Total thermal coal-based capacity addition from FY 2023-24 to 2026-27 (till June 2026) is about 21,080 MW. During the same period, Renewable Energy (RE) capacity addition including Large Hydro is 1,16,487 MW comprising of 5,130 of Large Hydro, 95,372 MW of Solar, 14,810 MW of wind, 229 MW of small Hydro and 946 MW of Biomass & others. The share of Non-Fossil Fuel sources has increased from 43.0 % to 54.2% in this period.

(d): India, at the 26th Conference of Parties (COP) to the UNFCCC in November 2021, announced its target to achieve 'Net Zero' by 2070. India is committed to achieve this goal, by keeping in view, energy security, affordability and accessibility as critical inalienable priorities to ensure growth and development alongside Energy transition of the economy towards 'Net Zero'.

India has reached a major milestone in its energy transition by achieving the NDC goal of 50% of its installed electric power capacity from non-fossil fuel sources; five years ahead of the committed timeline of 2030. The share of non-fossil fuel installed capacity in the total installed capacity of the country as on 30.06.2026 is about 54.2%. This is an outcome of a coherent whole of government approach.

ANNEXURE

**ANNEXURE REFERRED IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 956
ANSWERED IN THE RAJYA SABHA ON 27.07.2026**

Detail of estimated growth in peak demand of the country (All-India) from the FY 2026-27 to 2031-32 is given as under:

FY	Peak Demand [Giga Watt (GW)]	% Growth
2026-27	289	17.96
2027-28	305	5.54
2028-29	325	6.55
2029-30	345	6.15
2030-31	364	5.51
2031-32	388	6.59

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.957
ANSWERED ON 27.07.2026

VGF SCHEME FOR BATTERY ENERGY STORAGE SYSTEMS

957 DR. K. LAXMAN:
SHRI RAMRAO SAKHARAM WADKUTE:

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

- (a) the progress made in implementation of the Viability Gap Funding scheme for Battery Energy Storage Systems (BESS), including the storage capacity awarded and commissioned;
- (b) the measures taken to promote deployment of standalone and co-located battery storage projects for renewable energy integration, improve grid flexibility and enhance power reliability;
- (c) the role envisaged for BESS in meeting peak electricity demand and supporting grid reliability;
- (d) whether Government proposes additional policy regulatory or financial measures to accelerate the adoptive of energy storage technologies across the country; and
- (e) if so, the details thereof?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) The Ministry of Power is administering two Viability Gap Funding (VGF) schemes for the development of total 43.8 GWh of Battery Energy Storage Systems (BESS). The details, including the implementation status of the two schemes, are as under:

(i) Viability Gap Funding (VGF) Scheme through Budgetary Support: The Central Government approved the Viability Gap Funding (VGF) Scheme for the development of 4 GWh of Battery Energy Storage System (BESS) capacity with a budgetary outlay of ₹3,760 crore. Subsequently, owing to the decline in BESS prices, the capacity supported under the Scheme has been enhanced to 13.8 GWh within the approved budgetary outlay. As on date, Letters of Award (LoAs) have been issued for 12.7 GWh capacity and corresponding Battery Energy Storage Purchase Agreements (BESPAs) have been executed & financial closure has been achieved for 6.54 GWh. Further, 0.5 GWh capacity has been commissioned and VGF amounting to ₹168.04 crore has been disbursed.

(ii) Viability Gap Funding (VGF) scheme for development of 30 GWh of BESS supported through Power System Development Fund (PSDF): The Ministry of Power, vide order dated 09.06.2025, initiated VGF scheme for development of 30 GWh of BESS with financial support of ₹5,400 crore from the Power System Development Fund. Under this scheme, 25 GWh has been

allocated to 15 States for meeting their storage requirements, while 5 GWh has been allocated to NTPC Ltd. to support electricity demand during non-solar hours and optimize the utilization of existing thermal and transmission infrastructure. As on date, Letters of Award (LoAs) have been issued for 22.43 GWh, Battery Energy Storage Purchase Agreements (BESPAs) have been executed for 19.65 GWh, and financial closure has been achieved for 5 GWh capacity. Further, sanction for the disbursement of ₹180 crore towards VGF, consequent upon the achievement of financial closure, has been issued.

(b), (d) & (e) : For the integration of renewable energy, Government has undertaken a series of coordinated policy, regulatory, demand-side, and supply-side measures to promote the development and deployment of Energy Storage Systems (ESS), including Battery Energy Storage Systems (BESS). The details of these measures are provided in the **Annexure**.

(c) : Battery Energy Storage Systems (BESS) can play a vital role in meeting peak electricity demand and ensuring grid reliability by storing electricity during periods of low demand or high renewable energy generation and supplying it during periods of peak demand. BESS enables time-shifting of energy, enhances grid flexibility, facilitates the integration of renewable energy, and reduces dependence on expensive peak power. Generating companies can use BESS to maximize the value of their generation by shifting off-peak energy to peak periods, while grid operators and distribution licensees can utilize BESS for peak load and congestion management, demand-supply balancing and ensuring reliable and quality power supply to consumers. BESS with Grid Forming Inverters may also help in stable grid operation.

ANNEXURE REFERRED IN REPLY TO PARTS (b), (d)& (e) OF UNSTARRED QUESTION NO. 957 ANSWERED IN THE RAJYA SABHA ON 27.07.2026

I. Policy and Regulatory Measures

1. The Electricity Rules were amended in December 2022 to explicitly recognize Energy Storage Systems (ESS) as an integral part of the power system, enabling their participation across generation, transmission and distribution functions.
2. In October 2022, ESS were included in the Harmonised Master List of Infrastructure of the Ministry of Finance, facilitating access to long-tenure and lower-cost financing.
3. In June 2023, the Government issued Guidelines for Preparation of Resource Adequacy Plans by State utilities, under which energy storage has been incorporated as a key planning resource for meeting peak demand and ensuring system reliability.
4. A National Framework for Promotion of Energy Storage Systems was issued in September 2023, providing a comprehensive roadmap for deployment, market integration and regulatory facilitation of storage technologies.
5. CEA (Measures Relating to Safety and Electric Supply) (First Amendment) Regulations, 2025 has been notified on 30.03.2026, which includes the safety requirements for BESS.
6. CEA's (Technical Standards for Construction of Electrical Plants and Electric Lines) Amendment Regulations, 2026 has been notified to specify the construction standards for BESS.

II. Demand-Side Enablers and Market Development Measures

7. Waiver of Inter-State Transmission System (ISTS) charges has been provided for co-located BESS projects commissioned up to June 2028, to improve project viability. For non co-located BESS, 100% ISTS charges waiver has been extended for projects commissioned by June 2025 with 25% annual reduction in waiver thereafter.
8. In January 2022, CERC allowed storage-based resources to provide ancillary services, including secondary and tertiary reserves, enabling ESS to support real-time grid balancing alongside conventional generators.
9. Tariff-Based Competitive Bidding (TBCB) Guidelines for procurement of BESS by distribution licensees were notified in March 2022, creating a transparent mechanism for large-scale storage procurement.
10. Under the Electricity (Rights of Consumers) Rules, 2020, amended in December 2022, consumers using diesel generator sets have been mandated to shift to cleaner backup solutions, including energy storage, within timelines specified by State Commissions.
11. Electricity supplied from BESS has been allowed to participate in the High-Price Day-Ahead Market, launched in March 2023, enabling storage to respond to peak price signals similar to gas-based generation.

III. Supply-Side and Manufacturing-Focused Measures

12. The Ministry of Heavy Industries is implementing a Production-Linked Incentive (PLI) Scheme with an outlay of ₹18,100 crore for establishing 50 GWh of Advanced Chemistry Cell manufacturing capacity, of which 10 GWh is earmarked for grid-scale stationary storage.

13. CERC has allowed separate grid connectivity during non-solar hours, enabling additional renewable capacity at existing substations and facilitating storage-based shifting of power to evening and night hours (September 2025).

14. Through amendment of the Electricity Rules in September 2025, energy storage systems have been permitted to be developed, owned, leased or operated by consumers, expanding the range of ownership and business models.

15. In February 2025, CEA issued an advisory on co-location of ESS with solar power projects, recommending storage capacity of at least 10% of installed solar capacity for a minimum duration of two hours, to improve dispatchability of solar power.
