GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
STARRED QUESTION NO.281
ANSWERED ON 20.03.2025

CAPTIVE STATUS OF POWER PROJECTS

†*281. SHRI GAJENDRA SINGH PATEL:
SHRI JASHUBHAI BHILUBHAI RATHVA:

Will the Minister of POWER
be pleased to state:

(a) the details of the specific criteria proposed to be adopted for determining the captive status of power projects;

(b) the systems likely to be introduced to measure the impact of energy efficiency initiatives in various sectors;

(c) the manner in which State Governments would be held accountable for implementing energy efficiency retrofit guidelines; and

(d) the manner in which India's strategy with regard to energy efficiency is compared to international best practices?

A N S W E R

THE MINISTER OF POWER

(SHRI MANOHAR LAL)

(a) to (d) : A Statement is laid on the Table of the House.

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STATEMENT

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) IN RESPECT OF LOK SABHA STARRED QUESTION NO. 281 FOR REPLY ON 20.03.2025 REGARDING CAPTIVE STATUS OF POWER PROJECTS ASKED BY SHRI GAJENDRA SINGH PATEL AND SHRI JASHUBHAI BHILUBHAI RATHVA.

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(a) : As per Rule 3 of the Electricity Rules, 2005, a power plant qualifies as a captive generating plant if its users collectively own at least 26% of the plant and consume at least 51% of the electricity it generates annually. For a power plant owned by an association of persons, each user must consume electricity in proportion to their ownership share, with a permissible variation of 10%. If the plant is set up by a registered cooperative society, these ownership and consumption criteria must be met collectively by its members.

(b) : The impact of energy efficiency initiatives in various sectors is measured using specific indicators assessed by the Bureau of Energy Efficiency (BEE):

(1) Electrical Appliances: Measured by electricity savings (kWh) due to the deployment of energy-efficient appliances.

(2) Buildings: Assessed through the reduction in cooling load achieved by improving passive design measures in the building envelope.

(3) Industry: Evaluated based on energy savings achieved (Tonnes of Oil Equivalent) per unit of production.

(4) Transport: Measured by the increase in distance travelled per unit of fuel consumed.

These indicators help quantify the effectiveness of energy efficiency measures across different sectors.

(c) : The Bureau of Energy Efficiency has developed comprehensive manuals/guidelines to guide the assessment, planning and implementation of energy-efficient retrofits in both existing commercial and residential buildings. These manuals have been launched in February, 2025 for the benefit of public at large.

These manuals are voluntary in nature and do not hold the State Governments accountable for implementing the retrofitting options at the State level.

(d) : India is among the global leaders in energy conservation. According to estimates by International Energy Agency, global energy intensity improved by 2% between 2010 and 2019, while India achieved a higher improvement of 2.5%. Between 2021 and 2024, global energy intensity improved by 1.3%, whereas India recorded an improvement of 1.6%. These estimates measure energy intensity in Mega Joules per USD at 2015 Purchasing Power Parity (PPP).

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.3250
ANSWERED ON 20.03.2025

NTPC'S WATER MANAGEMENT STRATEGY

3250. SHRI VISHNU DAYAL RAM:
SMT. SHOBHANABEN MAHENDRASINH BARAIYA:
SHRI MANISH JAISWAL:
SHRI BIBHU PRASAD TARAI:

Will the Minister of POWER be pleased to state:

(a) the manner in which NTPC's water management strategy aligns with India's overall sustainability goals in the power sector;

(b) whether there are specific regions or plants where NTPC has achieved the most significant water savings, if so, the details thereof; and

(c) whether there are any new policies or incentives planned to encourage other power companies to adopt similar sustainability practices, if so, the details thereof?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): Ministry of Environment Forest and Climate Change (MoEF&CC) has issued Environment Protection (Amendment) Rules, 2015 vide notification dated 07th December, 2015 which specify limit for specific water consumption by Thermal Power Plants (TPPs) and further amended on 28.06.2018.

Accordingly, NTPC Ltd. has taken various initiatives towards water conservation which include Optimization of water consumption through advanced technologies and process reengineering, Implementation of robust "Water Policy", "Rainwater Harvesting Policy" and Maintaining "Zero Liquid Discharge (ZLD)" status across all the stations. The various measures/systems adopted by NTPC Ltd. for water conservation are as under: -

i. **Implementation of Zero liquid Discharge (ZLD).**
ii. **High Concentrated Ash Slurry Disposal (HCSD) Systems.**
iii. **Dry Fly Ash Evacuation System.**
iv. **Liquid Waste Treatment Plants and Rainwater Harvesting Systems.**
v. **Ash Water Recirculation System (AWRS).**
vi. **Air cooled condenser (ACC) and Dry Bottom Ash Handling Systems (DBAHS) in recently awarded projects.**

.....2.

(b) : NTPC has installed 'Air Cooled Condenser (ACC)' at 02 Units of North Karanpura Thermal Power Plant (3x660 MW), Jharkhand commissioned on 18.01.2023 and 28.02.2024 respectively resulting in 60% reduction in water consumption in respect to Cooling Tower system. Through this, NTPC has demonstrated its commitment towards water conservation.

(c) : The sustainability practices for water savings followed by NTPC are also adopted by other power generating companies such as Damodar Valley Corporation (DVC), Tehri Hydro Development Corporation of India Ltd (THDCIL), etc.

The measures taken by Government of India to encourage power generating companies to adopt sustainability practices are as under:

- **Ministry of Environment Forest and Climate Change (MoEF&CC) while issuing Environment Clearances (EC) to the Thermal Power Plants (TPPs) specify limit of water consumption which are complied by the respective Thermal Power Plants.**

- **Govt. of India (GoI) has notified Tariff policy on 28.01.2016 wherein it is mandated that the thermal power plants including the existing plants located within 50 km radius of sewage treatment plant of Municipality/ local bodies/similar organisation shall, in the order of their closeness to sewage treatment plant, mandatorily use treated sewage water produced by these bodies and the associated cost on this account be allowed as pass through in the tariff.**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.3255
ANSWERED ON 20.03.2025

POWER CAPACITY EXPANSION

3255. DR. SHASHI THAROOR:

Will the Minister of POWER be pleased to state:

(a) whether there has been any progress on the planned thermal power capacity of 80,000 MW by 2031-32, including the current status of the 28,020 MW under construction and 19,200 MW awarded in the year 2024-25;

(b) if so, the details thereof and if not, the reasons therefor;

(c) the details of the key challenges faced in hydropower expansion;

(d) the details of the key challenges faced in nuclear power expansion with only 7,300 MW under construction against a 100 GW target by 2047;

(e) whether any measures have been taken to tackle the issues of challenging hydropower and nuclear power expansion;

(f) if so, the details thereof and if not, the reasons therefor;

(g) the primary hurdles in integrating renewable energy into the grid–including grid integration, storage and regulation; and

(h) whether any measures are proposed to overcome the same and 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) : Government of India (GoI) has proposed in November, 2023 for setting up of an additional minimum 80,000 MW coal-based thermal capacity by 2031-32. Against this target, a total coal-based capacity of 9,350 MW has already been commissioned in 2023-24 & 2024-25 and currently, 29,900 MW of thermal capacity is under construction (Annexure-I). In FY 2024-25, contracts for 22,640 MW thermal capacity have been awarded (Annexure-II), out of which, 5,600 MW thermal capacity is now under construction.

(c) : The key challenges faced in Hydropower expansion are Land acquisition, Environment and Forest clearances, Rehabilitation & Resettlement, Inadequate Infrastructural facilities & accessibility, Law & Order/Local issues, Geological Surprises, Natural Calamities, Inter-state issues, Unfavorable State policies etc.

(d) : The key challenges faced in development of new nuclear power projects are the availability of suitable site & its acquisition, Rehabilitation & Resettlement, Environment and Forest clearances, Law & Order / Local issues, timely supplies of equipment, availability of skilled workforce and addressing public apprehensions etc. Further, there are high upfront cost of reactors, regulatory requirements, and the dependency on imported nuclear fuel.

In addition to under construction 7300 MW nuclear power capacity, an additional capacity of 7000 MW is also under implementation, at pre-project activities stage.

.....2.

(e) & (f) : Central Government has taken following measures

(I) To promote the development of hydropower projects in the country:

- **Govt. of India on 08.03.2019 approved Large Hydro Power (LHPs) (> 25 MW projects) as Renewable Energy source, Hydro Purchase Obligation (HPO) as a separate entity within Non-solar Renewable Purchase Obligation (RPO), Tariff rationalization measures for bringing down hydro power tariff, Budgetary Support for Flood Moderation/Storage Hydro Electric Projects (HEPs), Budgetary Support to Cost of Enabling Infrastructure, i.e. roads/bridges.**
- **Govt. of India on 11.09.2024 has approved the modified scheme of budgetary support towards enabling infrastructure of hydroelectric projects wherein the ambit of enabling infrastructure has been widened.**
- **The timeline for concurrence of Detailed Project Report (DPR) of Hydro Electric Projects (HEPs) has been reduced to 125 days.**
- **Waiver of Inter-state Transmission System (ISTS) Charges on the transmission of power from new Hydro Power Projects, for which construction work is awarded and Power Purchase Agreement (PPA) is signed on or before 30.06.2025. Subsequently, part waiver of ISTS charges, in steps of 25% from 01.07.2025 to 01.07.2028, have been extended for Hydro Power Projects for which construction work is awarded and PPA is signed up to 30.06.2028.**
- **Govt. of India on 08.10.24 has approved the Central Financial Assistance (CFA) to the State Governments of NER towards their equity participation for development of Hydro Electric Projects in the North Eastern Region (NER) through Joint Venture (JV) Collaboration between State entities and Central Public Sector Undertakings.**
- **Measures to reduce time and cost overrun has been notified by Government of India on 8.11.2019.**
- **An IT portal, namely Jal Vidyut Amrit has been developed for monitoring the progress of under-construction hydroelectric projects.**
- **To proactively prevent contractual disputes in hydro projects, a Dispute Avoidance Mechanism has been implemented using an 'Independent Engineer' (IE) system from the project's outset. The Ministry has curated a panel of domain experts renowned for their integrity and track record. CPSEs and contractors jointly select an expert from this panel for each works package, designated as the 'Independent Engineer' (IE) for the respective contract. Disputes referred to the IE are resolved through hearings and site inspections.**
- **Government of India has established three Conciliation Committees of Independent Experts (CCIE) to address contractual disputes in projects carried out by CPSUs and Statutory Bodies under the Ministry of Power.**

(II) To promote the development of Nuclear Power projects in the country:

- **Nuclear Power Projects are being closely monitored with state governments to expedite land acquisition and implementation of Rehabilitation & Resettlement (R&R) packages for the Project Affected Persons (PAPs).**
- **Taking up pre-project activities in advance and expediting them, close monitoring and follow-up with manufacturers to ensure their timely delivery.**
- **Implementation of an exhaustive, structured, multi-pronged public awareness programme to allay the concerns of the public regarding nuclear power plants..**

.....3.

(g) & (h) : A robust national grid has been established to facilitate the transfer of power from power surplus regions to power deficit regions. The inter-regional transmission capacity has been increased from 75,050 MW during 2016-17 to 1,18,740 MW as on 31.12.2024. The capacity of National Grid is being expanded on a continuous basis commensurate with the growth in electricity generation and electricity demand.

The primary challenges in integrating renewable energy into the grid are intermittency in RE generation, non-availability of adequate flexible resources, etc.

The Government has taken various measures to facilitate the integration of Renewable Energy (RE) resources into the National Grid to ensure reliability and stability as under:

(i) Construction of Intra-State and Inter-State transmission systems for evacuation of Renewable power.

(ii) Transmission plan for integration of more than 500 GW RE capacity by 2030 has been prepared.

(iii) Setting up of Regional Energy Management Centers (REMCs) for better forecasting of renewable power and to assist grid operators to manage variability and intermittency of renewable power.

(iv) Innovative products like Solar-Wind Hybrid Projects, RE projects with energy storage systems and supply of RE power balanced with power from non-RE sources launched to reduce intermittency.

(v) Implementation of Green Term Ahead Market (GTAM) and Green Day Ahead Market (GDAM) for sale of renewable energy.

(vi) Flexibility in generation and Scheduling of Thermal/Hydro Power Stations through bundling with Renewable Energy and Storage Power. Flexibilization of thermal generation is mandated to address the variability of RE generation.

(vii) Central Financial Assistance (CFA) is being provided to the States for setting up Transmission infrastructure for RE integration within their State under the Green Energy Corridor Scheme.

(viii) CEA (Technical Standards for Connectivity to the Grid) Regulations lay down the minimum technical requirements for the RE generating plants to ensure the safe, secure and reliable operation of the grid. The compliances to the said regulations by RE plants are verified jointly by Central Transmission Utility (CTUIL) and Grid-India/ Regional Load Despatch Centres (RLDCs) before granting connectivity/interconnection to the national grid. Robust compliances verification is done before interconnection of any new plant to the grid.

(ix) Indian Electricity Grid Code mandates that RE plants participate in the primary and secondary frequency control in case of contingencies. Hybrid RE power plants, Energy Storage Systems such as BESS (Battery Energy Storage System) and PSP (Pump Storage Project) are being promoted for mitigating variability in RE generation and provide adequate frequency support to the grid.

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ANNEXURE-I

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 3255 ANSWERED IN THE LOK SABHA ON 20.03.2025

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Details of Under Construction Thermal Capacity (Financial Year Wise)						
						(As on 01-03-2025)
Sl. No	**Project Name/ Impl. Agency**	**Sector**	**State**	**Unit No.**	**Capacity (MW)**	**Anticipated Trial Run Date**
F Y. 2024-25						
1	North Chennai TPP, St-III (TANGEDCO)	STATE	Tamil Nadu	U-1	800	Mar-25
2	Yadadri TPS (TSGENCO)	STATE	Telangana	U-1	800	Mar-25
3	Obra-C STPP (UPRVUNL)	STATE	Uttar Pradesh	U-2	660	Mar-25
4	Patratu STPP (PVUNL)	CENTRAL	Jharkhand	U-1	800	Mar-25
5	North Karanpura STPP(NTPC)	CENTRAL	Jharkhand	U-3	660	Mar-25
6	Barh STPP St-I (NTPC)	CENTRAL	Bihar	U-3	660	Mar-25
Sub-Total					4,380	
F Y. 2025-26						
7	Udangudi STPP St-I (TANGEDCO)	STATE	Tamil Nadu	U-1	660	May-25
8	Sagardighi TPP St-III (WBPDCL)	STATE	West Bengal	U-1	660	May-25
9	Ghatampur TPP (NUPPL)	CENTRAL	Uttar Pradesh	U-2	660	May-25
10	Buxar TPP (SJVN)	CENTRAL	Bihar	U-1	660	May-25
11	Yadadri TPS (TSGENCO)	STATE	Telangana	U-4	800	Jun-25
12	Khurja SCTPP (THDC)	CENTRAL	Uttar Pradesh	U-2	660	Jun-25
13	Yadadri TPS (TSGENCO)	STATE	Telangana	U-3	800	Jul-25
14	Udangudi STPP St-I (TANGEDCO)	STATE	Tamil Nadu	U-2	660	Aug-25
15	Yadadri TPS (TSGENCO)	STATE	Telangana	U-5	800	Sep-25
16	Buxar TPP (SJVN)	CENTRAL	Bihar	U-2	660	Sep-25
17	Ghatampur TPP (NUPPL)	CENTRAL	Uttar Pradesh	U-3	660	Oct-25
18	Patratu STPP (PVUNL)	CENTRAL	Jharkhand	U-2	800	Dec-25
19	Patratu STPP (PVUNL)	CENTRAL	Jharkhand	U-3	800	Mar-26
Sub-Total					9,280	
F Y. 2026-27						
20	Ennore SCTPP (TANGEDCO)	STATE	Tamil Nadu	U-1	660	Sept-26
21	Ennore SCTPP (TANGEDCO)	STATE	Tamil Nadu	U-2	660	Nov-26
22	Mahan STPP,St-II (Mahan Energen)	PRIVATE	M. P.	U-3	800	Dec-26
Sub-Total					2,120	

F Y. 2027-28						
23	**Mahan STPP,St-II (Mahan Energen)**	**PRIVATE**	**M. P.**	**U-4**	**800**	**May-27**
24	**Raigarh USCTPP, St-II/ Adani Power**	**PRIVATE**	**Chhattisgarh**	**U-3**	**800**	**Jun-27**
25	**Talcher TPP St-III (NTPC)**	**CENTRAL**	**Odisha**	**U-1**	**660**	**Sep-27**
26	**Raigarh USCTPP, St-II/ Adani Power**	**PRIVATE**	**Chhattisgarh**	**U-4**	**800**	**Oct-27**
27	**Talcher TPP St-III (NTPC)**	**CENTRAL**	**Odisha**	**U-2**	**660**	**Dec-27**
28	**Lara STPP St-II (NTPC)**	**CENTRAL**	**Chhattisgarh**	**U-1**	**800**	**Dec-27**
29	**Raipur Ext TPP, Ph-II /Adani Power**	**PRIVATE**	**Chhattisgarh**	**U-1**	**800**	**Jan-28**
Sub-Total					**5,320**	
F Y. 2028-29						
30	**Lara STPP St-II (NTPC)**	**CENTRAL**	**Chhattisgarh**	**U-2**	**800**	**Jun-28**
31	**Raipur Ext TPP, Ph-II /Adani Power**	**PRIVATE**	**Chhattisgarh**	**U-2**	**800**	**Jul-28**
32	**Koderma TPS, St-II/ DVC**	**CENTRAL**	**Jharkhand**	**U-1**	**800**	**Aug-28**
33	**Koderma TPS, St-II/ DVC**	**CENTRAL**	**Jharkhand**	**U-2**	**800**	**Dec-28**
34	**NLC TALABIRA TPP (NLC)**	**CENTRAL**	**Odisha**	**U-1**	**800**	**Mar-29**
Sub-Total					**4,000**	
F Y. 2029-30						
35	**Singrauli STPP, St-III (NTPC)**	**CENTRAL**	**UP**	**U-1**	**800**	**May-29**
36	**NLC TALABIRA TPP (NLC)**	**CENTRAL**	**Odisha**	**U-2**	**800**	**Sep-29**
37	**DCR TPP Ext., Yamunanagar**	**State**	**Haryana**	**U-1**	**800**	**Sep-29**
38	**Sipat STPP, St-III (NTPC)**	**CENTRAL**	**Chhattisgarh**	**U-1**	**800**	**Sep-29**
39	**Singrauli STPP, St-III (NTPC)**	**CENTRAL**	**UP**	**U-2**	**800**	**Nov-29**
40	**NLC TALABIRA TPP (NLC)**	**CENTRAL**	**Odisha**	**U-3**	**800**	**Mar-30**
Sub-Total					**4,800**	
Grand Total					**29,900**	

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ANNEXURE-II

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 3255 ANSWERED IN THE LOK SABHA ON 20.03.2025

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Details of Awarded Thermal Capacity during the year 2024-25					
					(As on 01-03-2025)
Sl. No	**Project Name/ Impl. Agency**	**Sector**	**State**	**Capacity (MW)**	**Remarks**
1	Sipat STPP, St-III (NTPC)	Center	Chhattisgarh	800	Under Construction
2	Darlipalli-II (NTPC)	Center	Odisha	800	-
3	Raigarh USCTPP, St-II/ Adani Power	Private	Chhattisgarh	1,600	Under Construction
4	Mahan STPP,St-III (Mahan Energen)	Private	Madhya Pradesh	1,600	-
5	KodermaTPS , St-II (DVC)	Center	Jharkhand	1,600	Under Construction
6	Raipur Ext TPP, St-II /Adani Power	Private	Chhattisgarh	1,600	Under Construction
7	Mirjapur TPS / Adani Power	Private	Uttar Pradesh	1,600	-
8	Kawai STTP St-II / Adani Power	Private	Rajasthan	3,200	-
9	Telangana Stage II (NTPC)	Center	Telangana	2,400	-
10	New Nabi Nagar- II (NTPC)	Center	Bihar	2,400	-
11	Gadarwara Stage II (NTPC)	Center	Madhya Pradesh	1,600	-
12	Koradi TPP St-V (MSPGCL)	State	Maharashtra	1,320	-
13	Raghunathpur TPS, PH-II (DVC)	Center	West Bengal	1,320	-
14	Singareni St-II (SCCL)	State	Telangana	800	-
Total				22,640	

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.3278
ANSWERED ON 20.03.2025

HYDRO POWER PROJECTS

3278. SHRI ARUN BHARTI:

Will the Minister of POWER be pleased to state:

(a) the initiatives undertaken by the Government to declare large hydropower projects as renewable energy sources;

(b) the provisions of Hydro Renewable Energy Consumption Obligation for the designated consumers;

(c) the measures implemented to rationalize tariffs for hydropower projects and their impact on electricity prices;

(d) the quantum of budgetary support provided for flood moderation and storage hydroelectric projects; and

(e) the progress made in developing the enabling infrastructure like roads, bridges, and transmission lines for harnessing hydro potential?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : The Government of India vide OM dated 08.03.2019 (Annexure-I) issued measures to promote hydropower sector which, inter-alia, included declaring Large Hydropower Projects (capacity more than 25 MW) as Renewable Energy source.

(b) : Ministry of Power vide Gazette Notification dated 20.10.2023 (Annexure-II) has specified the minimum renewable energy consumption targets for different designated consumers viz. electricity distribution licensees, open access consumers and captive users to promote consumption of non-fossil energy sources.

(c) : The Government of India vide OM dated 08.03.2019 (Annexure-I) issued measures to promote hydropower sector which, inter-alia, included tariff rationalization measures viz. providing flexibility to the developers to determine tariff by back loading of tariff after increasing project life to 40 years, increasing debt repayment period to 18 years and introducing escalating tariff of 2%. Also, Central Electricity Regulatory Commission vide Tariff Regulations, 2024 has taken specific measures to rationalise hydropower tariff viz. recovery of depreciation extended till first 15 years of the useful life and remaining depreciable value to be spread over the balance useful life besides allowing hydro generating stations to charge depreciation lower than rates specified in

Tariff Regulations, 2024 to enable reduced front loading of tariff, incentives for efficiency, optimized Return on Equity (RoE) of 17% for new storage / pondage projects etc. The details of these measures are in Annexure-III.

(d) : Cabinet Committee on Economic Affairs (CCEA) on 27.02.2023 has sanctioned an amount of ₹6159.40 crore towards flood moderation component of Dibang Multi Purpose Project (MPP) to be reimbursed on quarterly basis to NHPC. The quantum of budgetary support provided by Ministry of Power for flood moderation and storage hydroelectric projects is as under:

Sl. No.	Name of the project &Installed Capacity	Project Developer	State	Grant released by Ministry of Power till date (₹ in crore)
1.	Dibang MPP (2880 MW)	NHPC	Arunachal Pradesh	546.86

(e) : Ministry of Power, vide O.M. dated 28.09.2021 has issued guidelines for providing budgetary support towards cost of enabling infrastructure for construction of roads / bridges. The ambit of budgetary support for the cost of enabling infrastructure has been widened vide O.M. dated 30.09.2024 by including the cost incurred for construction of transmission line from powerhouse to the nearest pooling point (including upgradation of pooling sub-stations of State or Central Transmission Utility), ropeways, railway sidings and communication infrastructure.

The budgetary support is in the form of 'reimbursement' after achievement of 25% financial progress w.r.t. approved/original project cost. The amount released by Ministry of Power for construction of roads / bridges for hydroelectric projects is given below:

Sl. No.	Name of the project &Installed Capacity	Project Developer	State	Grant released by Ministry of Power till date (₹ in crore)
1.	Luhri Stage-I HEP (210 MW)	SJVNL	Himachal Pradesh	42.75
2.	Dhaulasidh HEP (66 MW)	SJVNL	Himachal Pradesh	6.38
			Total	49.13

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ANNEXURE REFERRED IN REPLY TO PARTS (a) & (c) OF UNSTARRED QUESTION NO. 3278 ANSWERED IN THE LOK SABHA ON 20.03.2025

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F.No.15/2/2016-H-I (Pt.)
Government of India
Ministry of Power

Shram Shakti Bhawan, Rafi Marg
New Delhi, dated the 8th March, 2019

OFFICE MEMORANDUM

Subject: MEASURES TO PROMOTE HYDRO POWER SECTOR

In reference to communication received from Cabinet Secretariat vide D.O. No. 11/CM/2019(iii) dated 7.3.2019, the undersigned is directed to inform that the Government has approved the following measures to promote hydropower sector:-

2. **Declaring LHPs (> 25 MW projects) as Renewable Energy source:**

2.1 Large Hydropower Projects (LHPs, i.e. > 25 MW projects) are declared as Renewable Energy source. However, LHPs would not automatically be eligible for any differential treatment for statutory clearances such as Forest Clearance, environmental clearance, NBWL clearance, related Cumulative Impact Assessment & carrying Capacity study, etc., available to Small Hydropower Projects (SHPs), i.e., projects of capacity up to 25 MW. Ministry of Power shall continue to be the administrative Ministry for LHPs.

3. **Hydro Purchase Obligation (HPO) as a separate entity within Non – solar Renewable Purchase Obligation (RPO):**

3.1 Hydropower Purchase Obligation (HPO) is notified as a separate entity within Non - Solar Renewable Purchase Obligation (RPO). The HPO shall cover all LHPs commissioned after issue of this Office Memorandum as well as the untied capacity (i.e., without PPA) of the commissioned projects. This HPO will be within the existing Non-Solar RPO after increasing the percentage assigned for it so that existing Non-Solar RPO for other renewable sources remains unaffected by the introduction of HPO. The trajectory of annual HPO targets will be notified by Ministry of Power based on the projected capacity addition plans in hydropower sector. Necessary amendments will be introduced in the Tariff Policy and Tariff Regulations to operationalize HPO.

4. **Tariff rationalisation measures for bringing down hydropower tariff:**

4.1 Tariff rationalisation measures including providing flexibility to the developers to determine tariff by back loading of tariff after increasing project life to 40 years, increasing debt repayment period to 18 years and introducing escalating tariff of 2%.

4.2 The levellized tariff over the useful life of the project may be calculated on the basis of the norms specified in the CERC regulations and thereafter, the determination of year wise tariff, for a long term PPA for procurement of Hydro Power for a period of not less than specified years (depending upon the repayment plan for the debt raised by the generator such that major part of the loan is repaid during the tenure of such PPA), may be left to the Developer and DISCOMs as per their feasibility and depending upon the terms of repayment of loan negotiated with the lenders subject to-

(a) submission of such complete calculations with assumptions to be provided by the generator of hydro power at the time of filing of the application; and
(b) upfront approval by the appropriate Regulatory Commission.

5. **Budgetary Support for Flood Moderation/ Storage Hydro Electric Projects (HEPs):**

5.1 In-principle approval is accorded for providing budgetary support through the budgetary grant of Ministry of Power for Flood Moderation component for Storage HEPs to be set up in future. The value of flood moderation component will be worked by technical agencies, viz., CWC, etc. in accordance with the guidelines. The amount required for flood moderation/ storage costs shall be released, through MoP budgetary provisions after appraisal of each project, on a case to case basis, by Public Investment Board (PIB)/ Cabinet Committee on Economic Affairs (CCEA) as per due process.

6. **Budgetary Support to Cost of Enabling Infrastructure, i.e., roads/ bridges:**

6.1 In-principle approval is accorded for providing budgetary support through the budgetary grant of Ministry of Power for funding enabling infrastructure for hydropower projects i.e. roads / bridges. This support shall be applicable for projects starting construction after notification of this Office Memorandum. This budgetary support would be provided after appraisal/ approval of each project by PIB/ CCEA as per the extant rules/ due process. The limit of this grant for such roads and bridges would be as follows:

a) Rs. 1.5 crore per MW for projects upto 200 MW,
b) Rs. 1.0 crore per MW for projects above 200 MW.

7. This issues with the approval of the Competent Authority.

S. Benjamin

(S Benjamin)
Under Secretary to the Govt of India
Telefax: 23324357
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1. The Chairman, All State Electricity Boards / State Power Utilities
2. The Chairman, Central Electricity Authority, New Delhi.
3. The Principal Secretary / Commissioner (Power), All State Government and U.T.s
4. The CMDs of all PSUs under the administrative control of Ministry of Power
5. Chairperson, CERC
6. Chairpersons of all SERCs

Copy to:

1. Secretary, Department of Economic Affairs, Ministry of Finance
2. Secretary, Department of Expenditure Ministry of Finance
3. Secretary, Department of Financial Services, Ministry of Finance
4. Secretary, Department of Revenue, Ministry of Finance
5. Secretary, MNRE
6. Secretary, MoEF
7. Secretary, DoNER
8. CEO, NITI Aayog
9. Secretary, MoWR
10. Chairperson, CWC

Copy also for kind information to:

1. Director, Cabinet Secretariat, Rashtrapati Bhawan, New Delhi w.r.t D.O. No. 11/CM/2019(iii) dated 07.03.2019
2. Director, PMO, South Block, New Delhi.
3. All Joint Secretaries/ FA /EA of the Ministry of Power, Shram Shakti Bhawan, New Delhi.
4. All Director, Ministry of Power, Shram Shakti Bhawan, New Delhi.
5. Director (Tech.) NIC cell, MoP with the request to upload on the website of Ministry.

Copy to:

1. Chief Engineer (R&R) Ministry of Power, Shram Shakti Bhawan, New Delhi- with a request to issue appropriate directions to CERC/SERCs per Section 107 of the Electricity Act-2003 to incorporate above tariff rationalization measure as mentioned at Para 3.1, 4, 4.1 & 4.2 above in the Tariff Regulations and also for appropriate changes for other Paras above.

2. Chairperson, CEA- with a request to take necessary action to implement the above decisions.

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 3278 ANSWERED IN THE LOK SABHA ON 20.03.2025

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रजिस्ट्री सं. डी.एल.- 33004/99 REGD. No. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

सी.जी.-डी.एल.-अ.-23102023-249637
CG-DL-E-23102023-249637

असाधारण
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)
PART II—Section 3—Sub-section (ii)

प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

सं. 4438] नई दिल्ली, शुक्रवार, अक्तूबर 20, 2023/आश्विन 28, 1945
No. 4438] NEW DELHI, FRIDAY, OCTOBER 20, 2023/ASVINA 28, 1945

विद्युत मंत्रालय

अधिसूचना

नई दिल्ली, 20 अक्तूबर, 2023

का.आ. 4617(अ).—केन्द्रीय सरकार, ऊर्जा संरक्षण अधिनियम, 2001 (2001 का 52) की धारा 14 के खंड (ढ) और (भ) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए ऊर्जा दक्षता ब्यूरो के परामर्श से, ऊर्जा या फीडस्टॉक के रूप में अभिहित उपभोक्ताओं द्वारा गैर-जीवाश्म स्रोतों (नवीकरणीय ऊर्जा) के उपभोग का न्यूनतम हिस्सा तथा अनुज्ञप्तिधारी विद्युत वितरण के संबंध में विभिन्न अभिहित उपभोक्ताओं के लिए गैर-जीवाश्म स्रोतों के विभिन्न प्रकारों के उपभोग का भिन्न हिस्सा और अन्य अभिहित उपभोक्ता जैसे निर्बाध पहुंच वाले उपभोक्ता या आबद्ध उपयोगकर्ता जो उसके विस्तार तक अनुज्ञप्तिधारी वितरण से भिन्न अन्य स्रोतों से बिजली का उपभोग करते हैं, निम्न सारणी उनकी कुल इंगित ऊर्जा उपभोग के हिस्से के प्रतिशत को, विनिर्दिष्ट करती है

सारणी

क्र .सं.	वर्ष	पवन नवीकरणीय ऊर्जा	जल नवीकरणीय ऊर्जा	वितरित नवीकरणीय ऊर्जा*	अन्य नवीकरणीय ऊर्जा	कुल नवीकरणीय ऊर्जा
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	2024-25	0.67%	0.38%	1.50%	27.35%	**29.91%**
2.	2025-26	1.45%	1.22%	2.10%	28.24%	**33.01%**
3.	2026-27	1.97%	1.34%	2.70%	29.94%	**35.95%**

4.	2027-28	2.45%	1.42%	3.30%	31.64%	**38.81%**
5.	2028-29	2.95%	1.42%	3.90%	33.10%	**41.36%**
6.	2029-30	3.48%	1.33%	4.50%	34.02%	**43.33%**

टिप्पण 1: * पहाड़ी और पूर्वोत्तर राज्यों/संघ राज्य क्षेत्रों, अर्थात् अरुणाचल प्रदेश, असम, मणिपुर, मेघालय, मिजोरम, नागालैंड, सिक्किम, त्रिपुरा, जम्मू-कश्मीर, लद्दाख, हिमाचल प्रदेश और उत्तराखंड के लिए, वितरित नवीकरणीय ऊर्जा घटक सारणी में दिए गए का आधा होगा और इन राज्यों का शेष घटक अन्य नवीकरणीय ऊर्जा स्रोतों में सम्मिलित किया जाएगा।

टिप्पण 2: पवन नवीकरणीय ऊर्जा घटक की पूर्ति 31 मार्च, 2024 के पश्चात् आरंभ की गई पवन ऊर्जा परियोजनाओं (डब्ल्यूपीपी) से उत्पन्न ऊर्जा से की जाएगी ।

टिप्पण 3: जल नवीकरणीय ऊर्जा घटक की पूर्ति 31 मार्च, 2024 के पश्चात् आरंभ की गई जल विद्युत परियोजनाएं [जिसके अंतर्गत पंप भंडारण परियोजनाएं (पीएसपी) और लघु जल विद्युत परियोजनाएं (एसएचपी) भी हैं] से उत्पन्न ऊर्जा से की जाएगी:

परंतु, यह कि, जल नवीकरणीय ऊर्जा घटक की पूर्ति 31 मार्च, 2024 के पश्चात् आरंभ की गई जल विद्युत परियोजनाओं से राज्य/डिस्कॉम को प्रदान की जा रही नि:शुल्क बिजली से भी पूरी की जा सकती है:

परंतु, यह और कि, जल नवीकरणीय ऊर्जा घटक की पूर्ति भारत से बाहर स्थित जल विद्युत परियोजनाओं से भी पूरी की जा सकती है, जैसा कि केन्द्रीय सरकार द्वारा अलगअलग मामले के - आधार पर अनुमोदित किया जाए।

टिप्पण 4: वितरित नवीकरणीय ऊर्जा घटक की पूर्ति केवल 10 मेगावाट से कम आकार की नवीकरणीय ऊर्जा परियोजनाओं से उत्पादित ऊर्जा से पूरी की जाएगी और इसमें केन्द्रीय सरकार द्वारा अधिसूचित सौर संस्थापना के अधीन सभी कॉन्फ़िगरेशन (नेट मीटरिंग, ग्रॉस मीटरिंग, वर्चुअल नेट मीटरिंग, ग्रुप नेट मीटरिंग, मीटर स्थापना और किसी अन्य कॉन्फ़िगरेशन के पीछे) सम्मिलित होंगी।:

परंतु, यह कि वितरित नवीकरणीय ऊर्जा के संबंध में अनुपालन को सामान्यत: ऊर्जा (किलोवाट घंटा इकाइयों) के निबंधनों के अनुसार माना जाएगा:

परंतु, यह और कि अभिहित उपभोक्ता की दशा में वितरित नवीकरणीय ऊर्जा संस्थापनों के संबंध में उत्पादन डाटा प्रदान करने में असमर्थ है, तो रिपोर्ट की गई क्षमता को, प्रति दिन 3.5 यूनिट प्रति किलोवाट (किलोवाट घंटा/किलोवाट/) के गुणक द्वारा ऊर्जा के निबंधनों अनुसार वितरित नवीकरणीय ऊर्जा उत्पादन में परिवर्तित किया जाएगा।

टिप्पण 5: अन्य नवीकरणीय ऊर्जा घटक की पूर्ति टिप्पण 2, 3 और 4 में विनिर्दिष्ट से भिन्न किसी भी नवीकरणीय ऊर्जा विद्युत परियोजना से उत्पन्न ऊर्जा से पूरी की जा सकती है और 1 अप्रैल, 2024 से पूर्व आरंभ हुई सभी डब्ल्यूपीपी और जल विद्युत परियोजनाएं [जिसके अंतर्गत पंप भंडारण परियोजनाएं (पीएसपी) और लघु जल विद्युत परियोजनाएं (एसएचपी) हैं] ऊर्जा समाविष्ट करेगा, जिनमें नि:शुल्क बिजली भी शामिल है ।

2. किसी विशिष्ट वर्ष में अनुबद्ध पवन नवीकरणीय ऊर्जा उपभोग की उपलब्धि में किसी भी कमी को जल नवीकरणीय ऊर्जा से पूरा किया जा सकता है, जो उस वर्ष के लिए और विपर्ययेन उस ऊर्जा घटक से अधिक है।

3. उस वर्ष में पवन नवीकरणीय ऊर्जा या जल नवीकरणीय ऊर्जा घटक के अधीन अतिशेष अधिक ऊर्जा उपभोग को अन्य नवीकरणीय ऊर्जा घटक का हिस्सा माना जा सकता है।

4. किसी विशिष्ट वर्ष में अन्य नवीकरणीय ऊर्जा घटक के अधीन किसी भी अधिक ऊर्जा उपभोग का उपयोग, अनुबद्ध पवन नवीकरणीय ऊर्जा या जल नवीकरणीय ऊर्जा उपभोग की उपलब्धि में कमी को पूरा करने के लिए किया जा सकता है ।

5. अभिहितउपभोक्ता, जो निर्बाध या आबद्ध विद्युत संयंत्र वाले उपभोक्ता हैं, गैर-जीवाश्म ईंधन स्रोत के बावजूद विनिर्दिष्ट कुल नवीकरणीय ऊर्जा लक्ष्य के अनुसार उनकी बाध्यताओ को पूरा करेंगे।

6. विनिर्दिष्ट नवीकरणीय ऊर्जा उपभोग लक्ष्यों को भारत के राजपत्र, असाधारण, भाग 3, खण्ड 4, तारीख 24 मई , 2022: में प्रकाशित, केंद्रीय विद्युत नियामक आयोग (नवीकरणीय ऊर्जा उत्पादन के लिए नवीकरणीय ऊर्जा प्रमाणपत्रों के लिए निबंधन और शर्तें) विनियम, 2022 के अनुसार सीधे या प्रमाणपत्र के माध्यम से पूरा किया जाएगा।

परंतु, यह कि विनिर्दिष्ट नवीकरणीय ऊर्जा उपभोग लक्ष्यों में किसी भी कमी को अननुपालन माना जाएगा और उक्त अधिनियम की धारा 26 की उपधारा (3) के अधीन विनिर्दिष्ट ऐसी दर पर शास्ति अधिरोपित की जाएगी।

7. ब्यूरो अभिहित उपभोक्ताओं द्वारा नवीकरणीय ऊर्जा उपयोग के अनुपालन से संबंधित डाटा अनुरक्षित करेगा और केन्द्रीय सरकार को रिपोर्ट प्रस्तुत करेगा।

8. यह अधिसूचना 1 अप्रैल, 2024 को प्रवृत होगी और उस समय तक, विद्युत मंत्रालय के तारीख 19 सितम्बर, 2022 के शुद्धिपत्र के साथ पठित, आदेश संख्या 9/13/2021-आरसीएम, तारीख 22 जुलाई, 2022,के पैरा 5 से 14 में विनिर्दिष्ट आरपीओ प्रक्षेपवक्र लागू रहेगा।

[फा. सं. 9/13/2021-आरसीएम]

अजय तिवारी, अपर सचिव

MINISTRY OF POWER

NOTIFICATION

New Delhi, the 20th October, 2023

S.O. 4617(E).—In exercise of the powers conferred by clauses (*n*) and (*x*) of section 14 of the Energy Conservation Act, 2001 (52 of 2001), the Central Government in consultation with the Bureau of Energy Efficiency, hereby specifies the minimum share of consumption of non-fossil sources (renewable energy) by designated consumers as energy or feedstock and different share of consumption for different types of non-fossil sources for different designated consumers in respect of electricity distribution licensee and other designated consumers who are open access consumers or captive users to the extent of consumption of electricity from sources other than distribution licensee as a percentage of their total share of energy consumption indicated in the Table below:

TABLE

Sl.No	Year	Wind renewable energy	Hydro renewable energy	Distributed renewable energy*	Other renewable energy	Total renewable energy
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	2024-25	0.67%	0.38%	1.50%	27.35%	**29.91%**
2.	2025-26	1.45%	1.22%	2.10%	28.24%	**33.01%**
3.	2026-27	1.97%	1.34%	2.70%	29.94%	**35.95%**
4.	2027-28	2.45%	1.42%	3.30%	31.64%	**38.81%**
5.	2028-29	2.95%	1.42%	3.90%	33.10%	**41.36%**
6.	2029-30	3.48%	1.33%	4.50%	34.02%	**43.33%**

Note 1: *For hilly and North-Eastern States/Union Territories, namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Jammu & Kashmir, Ladakh, Himachal Pradesh and Uttarakhand, the distributed renewable energy component shall be half

of that given in the Table and the remaining component for these States shall be included in the other renewable energy sources.

Note 2: The wind renewable energy component shall be met by energy produced from Wind Power Projects (WPPs) commissioned after the 31st March, 2024.

Note 3: The hydro renewable energy component shall be met only by energy produced from Hydro Power Projects [including Pump Storage Projects (PSPs) and Small Hydro Projects (SHPs)], commissioned after the 31st March, 2024:

Provided that the hydro renewable energy component may also be met out of the free power being provided to the State/DISCOM from the Hydro Power Projects commissioned after the 31st March, 2024:

Provided further that the hydro renewable energy component may also be met from Hydro Power Projects located outside India as approved by the Central Government on a case-to-case basis.

Note 4: The distributed renewable energy component shall be met only from the energy generated from renewable energy projects that are less than 10 MW in size and shall include solar installations under all configurations (net metering, gross metering, virtual net metering, group net metering, behind the meter installations and any other configuration) notified by the Central Government:

Provided that the compliance against distributed renewable energy shall ordinarily be considered in terms of energy (Kilowatt hour units):

Provided further that in case the designated consumer is unable to provide generation data against distributed renewable energy installations, the reported capacity shall be transformed into distributed renewable energy generation in terms of energy by a multiplier of 3.5 units per kilowatt per day (kWh/kW/day).

Note 5: The other renewable energy component may be met by energy produced from any renewable energy power project other than specified in Note 2, 3 and 4 and shall comprise energy from all WPPs and Hydro Power Projects [including Pump Storage Projects (PSPs) and Small Hydro Projects (SHPs)], including free power, commissioned before the 1st April, 2024.

2. Any shortfall in achievement of stipulated wind renewable energy consumption in a particular year may be met with hydro renewable energy which is in excess of that energy component for that year and vice-versa.

3. The balance excess energy consumption under wind renewable energy or hydro renewable energy component in that year, may be considered as part of other renewable energy component.

4. Any excess energy consumption under Other renewable energy component in a particular year, may be utilised to meet the shortfall in achievement of stipulated Wind renewable energy or Hydro renewable energy consumption.

5. The designated consumers who are open access consumers or consumers with Captive Power Plants shall fulfil their obligation as per the specified total renewable energy target irrespective of the non-fossil fuel source.

6. The specified renewable energy consumption targets shall be met either directly or through Certificate in accordance with the Central Electricity Regulatory Commission (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022, published in the Gazette of India, Extraordinary, Part III, Section 4, dated the 24th May, 2022:

Provided that any shortfall in specified renewable energy consumption targets shall be treated as non-compliance and penalty shall be imposed as such rate specified under sub-section (3) of section 26 of the said Act.

7. The Bureau shall maintain data related to compliance of renewable energy utilisation by the designated consumer(s) and submit report to the Central Government.

8. This notification shall come into force on the 1st day of April, 2024 and till such time, the RPO trajectory specified in paragraphs 5 to 14 *vide* the Ministry of Power Order No. 9/13/2021-RCM, dated 22nd July, 2022 read with Corrigendum, dated the 19th September, 2022, shall remain in force.

[F.No. 9/13/2021-RCM]

AJAY TEWARI, Addl. Secy.

Uploaded by Dte. of Printing at Government of India Press, Ring Road, Mayapuri, New Delhi-110064
and Published by the Controller of Publications, Delhi-110054. SARVESH KUMAR SRIVASTAVA

ANNEXURE-III

ANNEXURE REFERRED IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 3278 ANSWERED IN THE LOK SABHA ON 20.03.2025

****

Specific measures to rationalise hydropower tariff:

1. **Measures to reduce front loading of Tariff: Until 2019-24 tariff period, recovery of Depreciation for the first 12 years of the useful life of hydro generating station was based on the Straight-line method (@ 5.28%) and remaining depreciable value to be spread over the balance useful life.**

   Under the Tariff Regulations, 2024 applicable for 2024-29 tariff period, to reduce front loading of tariff, a new provision has been introduced specifically for new projects wherein recovery of Depreciation, based on the Straight-line method has been extended till first 15 years (@ 4.22%) (considering repayment period of 15 years) of the useful life and remaining depreciable value to be spread over the balance useful life. There is no change for projects existing as on 31.3.2024.

   Further, Hydro Generating stations are allowed option to charge depreciation lower than the rates specified in the Tariff Regulations, 2024 so as to enable reduced front loading of tariff. Enabling provision introduced in the Tariff Regulations, 2024 are as under:

   "Provided further that in the case of an existing hydro generating station, the generating company, with the consent of the beneficiaries, may charge depreciation at a rate lower than that specified in Appendix I and Appendix II to these Regulations to reduce front loading of tariff "

2. **Incentives for efficiency: Tariff Regulations provides for incentives for hydro generating companies whose performance exceeds the normative parameters. This rewards efficient operators and encourages them to continuously improve their performance and optimal usage of plants, which may result in cost savings to beneficiaries to avoid expensive procurement of power from the market. Various incentives provided to hydro generating companies are as follows:**

   a) **Additional Annual Fixed Charges upto 3% of Capacity Charge if primary frequency response is provided beyond a threshold level of 30%.**

   b) **Incentive shall be payable to a ROR Hydro generating station @ 50 paisa/ kWh corresponding to the saleable scheduled energy during peak hours of the day in excess of average saleable scheduled energy during the day (24 hours).**

c) **Secondary energy charge rate increased from ₹ 1.20/unit to ₹ 1.30/unit.**

3. **Optimized Return on Equity (RoE): RoE is set at 17% for new storage/pondage projects, while existing projects retain previous rates (16.50%/15.50%).**

4. **Separation of Insurance Costs: Given the rising cost of insurance (due to events like flash floods), insurance expenses will now be allowed separately based on competitive bidding and prudence check. This ensures that tariff calculations are more reflective of actual costs, preventing unnecessary financial strain on consumers.**

5. **Support for Local Infrastructure: Up to ₹ 10 lakh/MW for development of local infrastructure, reducing project delays and cost and time over run.**

6. **Sharing of Non-Tariff Income: Hydro generating companies have considerable resources in the form of assets such as land banks and other enabling infrastructure that can be utilised to increase non-core revenues, ecotourism, etc. Accordingly, in order to encourage Hydro generating companies to further strengthen the eco-tourism, provision of sharing of Non-tariff income from eco-tourism has been introduced:**

   "84. Sharing of Non-Tariff Income: The non-tariff net income in case of generating station and transmission system from rent of land or buildings, ecotourism, sale of scrap, and advertisements shall be shared between the generating company or the transmission licensee and the beneficiaries or the long term customers, as the case may be, in the ratio of 1 : 1."

7. **Further, under the CERC (Sharing of Inter-state Transmission Charges and Losses) Regulations 2020 including amendments, the power scheduled from hydro generating stations are eligible for waiver of transmission charges as per the trajectory specified under the Regulations.**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.3278
ANSWERED ON 20.03.2025

HYDRO POWER PROJECTS

3278. SHRI ARUN BHARTI:

Will the Minister of POWER be pleased to state:

(a) the initiatives undertaken by the Government to declare large hydropower projects as renewable energy sources;

(b) the provisions of Hydro Renewable Energy Consumption Obligation for the designated consumers;

(c) the measures implemented to rationalize tariffs for hydropower projects and their impact on electricity prices;

(d) the quantum of budgetary support provided for flood moderation and storage hydroelectric projects; and

(e) the progress made in developing the enabling infrastructure like roads, bridges, and transmission lines for harnessing hydro potential?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : The Government of India vide OM dated 08.03.2019 (Annexure-I) issued measures to promote hydropower sector which, inter-alia, included declaring Large Hydropower Projects (capacity more than 25 MW) as Renewable Energy source.

(b) : Ministry of Power vide Gazette Notification dated 20.10.2023 (Annexure-II) has specified the minimum renewable energy consumption targets for different designated consumers viz. electricity distribution licensees, open access consumers and captive users to promote consumption of non-fossil energy sources.

(c) : The Government of India vide OM dated 08.03.2019 (Annexure-I) issued measures to promote hydropower sector which, inter-alia, included tariff rationalization measures viz. providing flexibility to the developers to determine tariff by back loading of tariff after increasing project life to 40 years, increasing debt repayment period to 18 years

.....2.

and introducing escalating tariff of 2%. Also, Central Electricity Regulatory Commission vide Tariff Regulations, 2024 has taken specific measures to rationalise hydropower tariff viz. recovery of depreciation extended till first 15 years of the useful life and remaining depreciable value to be spread over the balance useful life besides allowing hydro generating stations to charge depreciation lower than rates specified in Tariff Regulations, 2024 to enable reduced front loading of tariff, incentives for efficiency, optimized Return on Equity (RoE) of 17% for new storage / pondage projects etc. The details of these measures are in Annexure-III.

(d) : Cabinet Committee on Economic Affairs (CCEA) on 27.02.2023 has sanctioned an amount of ₹6159.40 crore towards flood moderation component of Dibang Multi Purpose Project (MPP) to be reimbursed on quarterly basis to NHPC. The quantum of budgetary support provided by Ministry of Power for flood moderation and storage hydroelectric projects is as under:

Sl. No.	Name of the project &Installed Capacity	Project Developer	State	Grant released by Ministry of Power till date (₹ in crore)
1.	Dibang MPP (2880 MW)	NHPC	Arunachal Pradesh	546.86

(e) : Ministry of Power, vide O.M. dated 28.09.2021 has issued guidelines for providing budgetary support towards cost of enabling infrastructure for construction of roads / bridges. The ambit of budgetary support for the cost of enabling infrastructure has been widened vide O.M. dated 30.09.2024 by including the cost incurred for construction of transmission line from powerhouse to the nearest pooling point (including upgradation of pooling sub-stations of State or Central Transmission Utility), ropeways, railway sidings and communication infrastructure.

The budgetary support is in the form of 'reimbursement' after achievement of 25% financial progress w.r.t. approved/original project cost. The amount released by Ministry of Power for construction of roads / bridges for hydroelectric projects is given below:

Sl. No.	Name of the project &Installed Capacity	Project Developer	State	Grant released by Ministry of Power till date (₹ in crore)
1.	Luhri Stage-I HEP (210 MW)	SJVNL	Himachal Pradesh	42.75
2.	Dhaulasidh HEP (66 MW)	SJVNL	Himachal Pradesh	6.38
			Total	49.13

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ANNEXURE-I

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (c) OF UNSTARRED QUESTION NO. 3278 ANSWERED IN THE LOK SABHA ON 20.03.2025

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ANNEXURE-II

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 3278 ANSWERED IN THE LOK SABHA ON 20.03.2025

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ANNEXURE-III

ANNEXURE REFERRED IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 3278 ANSWERED IN THE LOK SABHA ON 20.03.2025

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Specific measures to rationalise hydropower tariff:

8. **Measures to reduce front loading of Tariff: Until 2019-24 tariff period, recovery of Depreciation for the first 12 years of the useful life of hydro generating station was based on the Straight-line method (@ 5.28%) and remaining depreciable value to be spread over the balance useful life.**

   Under the Tariff Regulations, 2024 applicable for 2024-29 tariff period, to reduce front loading of tariff, a new provision has been introduced specifically for new projects wherein recovery of Depreciation, based on the Straight-line method has been extended till first 15 years (@ 4.22%) (considering repayment period of 15 years) of the useful life and remaining depreciable value to be spread over the balance useful life. There is no change for projects existing as on 31.3.2024.

   Further, Hydro Generating stations are allowed option to charge depreciation lower than the rates specified in the Tariff Regulations, 2024 so as to enable reduced front loading of tariff. Enabling provision introduced in the Tariff Regulations, 2024 are as under:

   "Provided further that in the case of an existing hydro generating station, the generating company, with the consent of the beneficiaries, may charge depreciation at a rate lower than that specified in Appendix I and Appendix II to these Regulations to reduce front loading of tariff "

9. **Incentives for efficiency: Tariff Regulations provides for incentives for hydro generating companies whose performance exceeds the normative parameters. This rewards efficient operators and encourages them to continuously improve their performance and optimal usage of plants, which may result in cost savings to beneficiaries to avoid expensive procurement of power from the market. Various incentives provided to hydro generating companies are as follows:**

   d) **Additional Annual Fixed Charges upto 3% of Capacity Charge if primary frequency response is provided beyond a threshold level of 30%.**

   e) **Incentive shall be payable to a ROR Hydro generating station @ 50 paisa/ kWh corresponding to the saleable scheduled energy during peak hours of the day in excess of average saleable scheduled energy during the day (24 hours).**

f) **Secondary energy charge rate increased from ₹ 1.20/unit to ₹ 1.30/unit.**

10. **Optimized Return on Equity (RoE): RoE is set at 17% for new storage/pondage projects, while existing projects retain previous rates (16.50%/15.50%).**

11. **Separation of Insurance Costs: Given the rising cost of insurance (due to events like flash floods), insurance expenses will now be allowed separately based on competitive bidding and prudence check. This ensures that tariff calculations are more reflective of actual costs, preventing unnecessary financial strain on consumers.**

12. **Support for Local Infrastructure: Up to ₹ 10 lakh/MW for development of local infrastructure, reducing project delays and cost and time over run.**

13. **Sharing of Non-Tariff Income: Hydro generating companies have considerable resources in the form of assets such as land banks and other enabling infrastructure that can be utilised to increase non-core revenues, ecotourism, etc. Accordingly, in order to encourage Hydro generating companies to further strengthen the eco-tourism, provision of sharing of Non-tariff income from eco-tourism has been introduced:**

"84. Sharing of Non-Tariff Income: The non-tariff net income in case of generating station and transmission system from rent of land or buildings, ecotourism, sale of scrap, and advertisements shall be shared between the generating company or the transmission licensee and the beneficiaries or the long term customers, as the case may be, in the ratio of 1 : 1."

14. **Further, under the CERC (Sharing of Inter-state Transmission Charges and Losses) Regulations 2020 including amendments, the power scheduled from hydro generating stations are eligible for waiver of transmission charges as per the trajectory specified under the Regulations.**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.3291
ANSWERED ON 20.03.2025

STATUS OF ELECTRIFICATION IN THE TRIBAL HAMLETS OF WEST BENGAL

3291. SHRI SAUMITRA KHAN:

Will the Minister of POWER be pleased to state:

(a) the current status of electrification in the tribal hamlets of West Bengal, district-wise;

(b) the details of the funds allocated and utilized for the electrification of tribal areas in the State of West Bengal during the last five years and the current year, year-wise; and

(c) the measures taken/being taken to expedite the electrification process in the tribal regions of West Bengal?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) to (c) : Government of India (GoI) has supplemented the efforts of the States through schemes like Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS) and Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA), to help them achieve the objective of providing quality and reliable power supply. As reported by the States, all the inhabited un-electrified census villages in the country were electrified by 28th April, 2018. A total of 22 villages in the State of West Bengal were electrified during DDUGJY. Moreover, under SAUBHAGYA, electrification of all willing households was completed by 31stMarch, 2019. As reported by the State of West Bengal, a total of 7,32,290 households were electrified during SAUBHAGYA period. Both the schemes stand closed as on 31.03.2022.

Government of India is further supporting States for grid electrification of left-out households during SAUBHAGYA, under the ongoing scheme of Revamped Distribution Sector Scheme (RDSS), launched in July, 2021. In addition, all households belonging to Particularly Vulnerable Tribal Group (PVTG) identified under PM-JANMAN (Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan) and tribal households under DA-JGUA (Dharti Aaba Janjatiya Gram Utkarsh Abhiyan) are being sanctioned for on-grid electricity connection under RDSS as per the scheme guidelines. As reported by the State, a total of 3,372 nos. of tribal households identified under PM-JANMAN have been electrified, through the State Plan.

The funds released to the State of West Bengal for electrification works under various GoI Schemes i.e., Restructured Accelerated Power Development and Reforms Programme (R-APDRP), IPDS, DDUGJY, SAUBHAGYA, and RDSS, during the last 5 years is as below:

	FY 21	FY 22	FY 23	FY 24	FY 25	Total
Funds released (in Rs. Cr.)	594	631	73	221	601	2,120

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.3301
ANSWERED ON 20.03.2025

BREAKDOWN OF HOUSEHOLD WITH AND WITHOUT ELECTRICITY

3301. SHRI GURMEET SINGH MEET HAYER:

Will the Minister of POWER
be pleased to state:

(a) the details of the total number of households with and without electricity access across the country, district-wise;

(b) the details of the number of households have and have not 24x7 ensured electricity supply; and

(c) the details of the areas with 24x7 electricity assurance, instances of power downtime reported during the last three years along with reasons and average downtime duration?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b) : Electricity being a concurrent subject, supply and distribution of electricity to the consumers is within the purview of the respective State Government/Power Utility. Government of India has been supporting the States/ UTs through schemes like Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS), Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) to improve access and quality of power supply to all consumers. These schemes stand closed as on 31.03.2022.

Under DDUGJY, electrification of all census villages was taken up and a total of 18,374 villages were electrified (State/UT-wise details at Annexure-I). Under SAUBHAGYA, as reported by States, electrification of all willing households was completed by 31st March, 2019. A total of 2.86 crore households were electrified during SAUBHAGYA period. (State-wise details at Annexure-II)

Government of India is further supporting the States for grid electrification of households left-out during SAUBHAGYA, under the ongoing scheme of Revamped Distribution Sector Scheme (RDSS), launched in July,2021.In addition, all households belonging to Particularly Vulnerable Tribal Group (PVTG) identified under PM-JANMAN (Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan) and households belonging to Scheduled Tribes under DA-JGUA (Dharti Aaba Janjatiya Gram Utkarsh Abhiyan) are being sanctioned for on-grid electricity connection under RDSS as per the scheme guidelines. Till date, works amounting to Rs. 4,643 Cr. have been sanctioned for electrification of 10,19,030 households (State/UT-wise details placed at Annexure-III). All Household electrification works sanctioned under RDSS are to be completed by the sunset date of the scheme.

.....2.

(c) : As per Rule (10) of the Electricity (Rights of Consumers) Rules, 2020, the distribution licensee shall supply 24x7 power to all consumers. However, the Commission may specify lower hours of supply for some categories of consumers like agriculture. The Rules are applicable for all States and for all areas including urban and rural areas. The data related to hours of supply in States/ UTs below feeder level i.e. at household level, is not maintained by Ministry of Power.

There is adequate availability of power in the country. Present installed generation capacity in the country is 466 GW. Government of India has addressed the critical issue of power deficiency by adding 234 GW of generation capacity since April, 2014 transforming the country from power deficit to power sufficient. Further, addition of 2,01,088 ckm of Transmission lines, 7,78,017 MVA of Transformation capacity and 82,790 MW of Inter-Regional transmission capacity has been achieved since 2014 with capability of transferring 1,18,740 MW from one corner of the country to another. However, there are few States that have met with shortages in the last three years. The State/UT-wise power supply position for last three years is given at Annexure-IV.

Ministry has advised these States to procure power from the surplus States/Generating Companies (GENCOs). Further, Government of India has taken following measures to ensure uninterrupted and reliable power supply in the Country:

i. **Steady supply of coal to all the thermal power plants is being ensured to prevent fuel shortages.**

ii. **Gas-based power plants of NTPC as well as other generators are being scheduled during high power demand period.**

iii. **All the GENCOs including IPPs and Central generating stations have been advised to generate and maintain full availability on daily basis excluding the period of planned maintenance or forced outage.**

iv. **Hydro based generation is being scheduled in a manner so as to conserve water for meeting demand during peak period.**

v. **Planned maintenance of generating units is being minimized during period of high demand.**

vi. **New power generation capacity is being monitored closely for timely addition.**

vii. **Government has facilitated power trading through regulatory framework whereby states with surplus generation can sell power to states which are in deficit through three (3) power exchanges viz. Indian Energy Exchange (IEX), Power Exchange India Ltd (PXIL) and Hindustan Power Exchange Ltd.**

viii. **Electricity market has been reformed by adding the Real Time Market (RTM), Green Day Ahead Market (GDAM), Green Term Ahead Market (GTAM), High Price Day Ahead Market (HPDAM) in Power exchange. Also, there is DEEP portal (Discovery of Efficiency Electricity Price) for e-bidding and e-Reverse for procurement of short-term power by DISCOMs.**

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ANNEXURE-I

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 3301 ANSWERED IN THE LOK SABHA ON 20.03.2025

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State-wise number of villages electrified under DDUGJY

Sl. No.	State	No. of Villages Electrified under DDUGJY
1	Arunachal Pradesh	1483
2	Assam	2732
3	Bihar	2906
4	Chhattisgarh	1078
5	Himachal Pradesh	28
6	J&K	129
7	Jharkhand	2583
8	Karnataka	39
9	Madhya Pradesh	422
10	Maharashtra	80
11	Manipur	366
12	Meghalaya	1051
13	Mizoram	54
14	Nagaland	78
15	Odisha	3281
16	Rajasthan	427
17	Tripura	26
18	Uttar Pradesh	1498
19	Uttarakhand	91
20	West Bengal	22
	Total	18,374

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ANNEXURE-II

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 3301 ANSWERED IN THE LOK SABHA ON 20.03.2025

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Number of Households electrified since the launch of SAUBHAGYA scheme incl. Additional Households under DDUGJY

Sl. No.	Name of the States	No. of Households electrified
1	Andhra Pradesh*	1,81,930
2	Arunachal Pradesh	47,089
3	Assam	23,26,656
4	Bihar	32,59,041
5	Chhattisgarh	7,92,368
6	Gujarat*	41,317
7	Haryana	54,681
8	Himachal Pradesh	12,891
9	Jammu& Kashmir	3,77,045
10	Jharkhand	17,30,708
11	Karnataka	3,83,798
12	Ladakh	10,456
13	Madhya Pradesh	19,84,264
14	Maharashtra	15,17,922
15	Manipur	1,08,115
16	Meghalaya	2,00,240
17	Mizoram	27,970
18	Nagaland	1,39,516
19	Odisha	24,52,444
20	Puducherry*	912
21	Punjab	3,477
22	Rajasthan	21,27,728
23	Sikkim	14,900
24	Tamil Nadu*	2,170
25	Telangana	5,15,084
26	Tripura	1,39,090
27	Uttar Pradesh	91,80,571
28	Uttarakhand	2,48,751
29	West Bengal	7,32,290
Total		2,86,13,424

Not funded under SAUBHAGYA Scheme

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ANNEXURE-III

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 3301 ANSWERED IN THE LOK SABHA ON 20.03.2025

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Household Electrification Works sanctioned under RDSS
(PVTG + Addl HHs + VVP)

Sl. No.	Name of State	Sanctioned Outlay (Rs. Crores)	Sanctioned GBS (Rs. Crores)	Total Households Sanctioned
A.	Addl. HHs Sanctioned under RDSS			
1	Rajasthan	459.18	275.51	1,90,959
2	Meghalaya	435.7	392.13	50,501
3	Mizoram	79.9	71.91	15,167
4	Nagaland	69.55	62.59	10,004
5	Uttar Pradesh	931.04	558.62	2,51,487
6	Andhra Pradesh	49.24	29.55	15,475
7	Jharkhand	7.47	4.48	872
8	Jammu & Kashmir	77.1	69.39	10,730
9	Bihar	238.86	143.32	35,467
10	Assam	785.55	706.99	1,27,111
11	Arunachal Pradesh	47.11	42.4	6,506
12	Manipur	214.44	193	36,972
13	Chhattisgarh	316.51	189.9	63,161
14	Kerala	0.33	0.2	40
Total (A)		3,711.98	2,739.99	8,14,452
B.	Electrification works sanctioned under RDSS in Vibrant Villages			
1	Himachal Pradesh*	6.08	5.47	0
2	Arunachal Pradesh	20.18	18.16	1,683
3	Uttarakhand	13.08	11.77	1,154
Total (B)		39.34	35.41	2,837
C.	Electrification of PVTG Households through Grid Connectivity under PM-JANMAN			
C1	Sanctioned under RDSS			
1	Andhra Pradesh	88.71	53.23	25,054
2	Bihar	0.28	0.17	51
3	Chhattisgarh	38.17	22.9	7,077
4	Jharkhand	74.13	44.47	12,442
5	Madhya Pradesh	143.39	86.02	29,290
6	Maharashtra	26.61	15.96	8,556
7	Rajasthan	40.34	24.2	17,633
8	Karnataka	3.77	2.26	1,615
9	Kerala	0.86	0.52	345
10	Tamil Nadu	29.89	17.94	10,673
11	Telangana	6.79	4.07	3,884
12	Tripura	61.52	55.37	11,664
13	Uttarakhand	0.6	0.54	669
14	Uttar Pradesh	1.1	0.66	316
Sub Total (C1)		516.15	328.31	1,29,269

C2	PVTG HH electrification covered under State Plan**			
1	Gujarat	0	0	
2	Odisha	0	0	
3	West Bengal	0	0	
Sub Total (C2)				
Total (C=C1+C2)		516.15	328.31	1,29,269
D.	Electrification of Tribal Households identified under DA-JGUA			
D1	Sanctioned Households			
1	Andhra Pradesh	19.12	11.47	4,921
2	Arunachal Pradesh	8.2	7.38	1,938
3	Bihar	61.4	36.84	7,117
4	Chhattisgarh	11.98	7.19	2,550
5	Himachal Pradesh	0.55	0.49	100
6	Karnataka	32.13	19.28	4,229
7	Kerala	5.88	3.53	1,097
8	Madhya Pradesh	39.82	23.89	6,493
9	Maharashtra	2.07	1.24	480
10	Telangana	110.73	66.44	26,525
11	Tripura	40.69	36.62	7,677
12	Uttar Pradesh	32.21	19.32	6,867
SubTotal (D1)		364.77	233.69	69,994
D2	Sanctioned Public Places			
1	Andhra Pradesh	0.7	0.42	182
2	Arunachal Pradesh	0.04	0.03	9
3	Madhya Pradesh	1.5	0.9	256
4	Telangana	2.89	1.74	672
5	Tripura	2.31	2.08	512
6	Uttar Pradesh	0.13	0.08	30
Sub Total (D2)		7.58	5.26	1,661
Total (D=D1+D2)		372.34	238.95	71,655
E.	Electrification works sanctioned under PM-AJAY			
1	Andhra Pradesh	3.5	2.1	811
2	Madhya Pradesh	0.002	0.001	6
Total (E)		3.5	2.1	817
Grand Total (A+B+C+D+E)		4,643.32	3,344.75	10,19,030

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ANNEXURE-IV

ANNEXURE REFERRED IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 3301 ANSWERED IN THE LOK SABHA ON 20.03.2025

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Power supply position of States/UTs in last three years

State/UT	FY23				FY24				FY25*			
	Energy Require-ment	Energy Supplied	Energy not Supplied		Energy Require-ment	Energy Supplied	Energy not Supplied		Energy Requirement	Energy Supplied	Energy not Supplied	
	(MU)	(MU)	(MU)	(%)	(MU)	(MU)	(MU)	(%)	(MU)	(MU)	(MU)	(%)
Chandigarh	1,788	1,788	0	0.0	1,789	1,789	0	0.0	1,843	1,843	0	0.0
Delhi	35,143	35,133	10	0.0	35,501	35,496	5	0.0	35,935	35,924	12	0.0
Haryana	61,451	60,945	506	0.8	63,983	63,636	348	0.0	65,605	65,575	30	0.0
Himachal Pradesh	12,649	12,542	107	0.8	12,805	12,767	38	0.0	12,495	12,458	37	0.3
UT of J&K and Ladakh	19,639	19,322	317	1.6	20,040	19,763	277	0.0	18,526	18,439	87	0.5
Punjab	69,522	69,220	302	0.4	69,533	69,528	5	0.0	72,623	72,623	0	0.0
Rajasthan	101,801	100,057	1,745	1.7	1,07,422	1,06,806	616	0.0	104,549	104,245	304	0.3
Uttar Pradesh	144,251	143,050	1,201	0.8	1,48,791	1,48,287	504	0.0	153,505	153,203	302	0.2
Uttarakhand	15,647	15,386	261	1.7	15,644	15,532	112	0.0	15,563	15,521	42	0.3
Chhattisgarh	37,446	37,374	72	0.2	39,930	39,872	58	0.1	38,757	38,729	28	0.1
Gujarat	139,043	138,999	44	0.0	145,768	145,740	28	0.0	138,514	138,514	0	0.0
Madhya Pradesh	92,683	92,325	358	0.4	99,301	99,150	151	0.2	95,286	95,162	124	0.1
Maharashtra	187,309	187,197	111	0.1	207,108	206,931	176	0.1	183,137	183,078	59	0.0
DD & DNH	10,018	10,018	0	0.0	10,164	10,164	0	0.0	9,925	9,925	0	0.0
Goa	4,669	4,669	0	0.0	5,111	5,111	0	0.0	4,904	4,904	0	0.0
Andhra Pradesh	72,302	71,893	410	0.6	80,209	80,151	57	0.1	71,471	71,468	3	0.0
Telangana	77,832	77,799	34	0.0	84,623	84,613	9	0.0	78,531	78,527	4	0.0
Karnataka	75,688	75,663	26	0.0	94,088	93,934	154	0.2	82,127	82,123	4	0.0
Kerala	27,747	27,726	21	0.1	30,943	30,938	5	0.0	28,597	28,588	8	0.0

Tamil Nadu	**114,798**	**114,722**	**77**	**0.1**	**126,163**	**126,151**	**12**	**0.0**	**118,313**	**118,308**	**5**	**0.0**
Puducherry	**3,051**	**3,050**	**1**	**0.0**	**3,456**	**3,455**	**1**	**0.0**	**3,244**	**3,244**	**0**	**0.0**
Lakshadweep	**64**	**64**	**0**	**0.0**	**64**	**64**	**0**	**0.0**	**61**	**61**	**0**	**0.0**
Bihar	**39,545**	**38,762**	**783**	**2.0**	**41,514**	**40,918**	**596**	**1.4**	**41,259**	**41,085**	**174**	**0.4**
Jharkhand	**13,278**	**12,288**	**990**	**7.5**	**14,408**	**13,858**	**550**	**3.8**	**13,941**	**13,865**	**76**	**0.5**
Odisha	**42,631**	**42,584**	**47**	**0.1**	**41,358**	**41,333**	**25**	**0.1**	**39,132**	**39,108**	**24**	**0.1**
West Bengal	**60,348**	**60,274**	**74**	**0.1**	**67,576**	**67,490**	**86**	**0.1**	**65,075**	**64,984**	**91**	**0.1**
Sikkim	**587**	**587**	**0**	**0.0**	**544**	**543**	**0**	**0.0**	**516**	**516**	**0**	**0.0**
Andaman and Nicobar	**348**	**348**	**0**	**0.1**	**386**	**374**	**12**	**3.2**	**386**	**375**	**11**	**2.9**
Arunachal Pradesh	**915**	**892**	**24**	**2.6**	**1,014**	**1,014**	**0**	**0.0**	**956**	**956**	**0**	**0.0**
Assam	**11,465**	**11,465**	**0**	**0.0**	**12,445**	**12,341**	**104**	**0.8**	**11,897**	**11,891**	**6**	**0.0**
Manipur	**1,014**	**1,014**	**0**	**0.0**	**1,023**	**1,008**	**15**	**1.5**	**978**	**974**	**5**	**0.5**
Meghalaya	**2,237**	**2,237**	**0**	**0.0**	**2,236**	**2,066**	**170**	**7.6**	**1,874**	**1,873**	**0**	**0.0**
Mizoram	**645**	**645**	**0**	**0.0**	**684**	**684**	**0**	**0.0**	**647**	**647**	**0**	**0.0**
Nagaland	**926**	**873**	**54**	**5.8**	**921**	**921**	**0**	**0.0**	**865**	**865**	**0**	**0.0**
Tripura	**1,547**	**1,547**	**0**	**0.0**	**1,691**	**1,691**	**0**	**0.0**	**1,779**	**1,779**	**0**	**0.0**
All India	**1,513,497**	**1,505,914**	**7,583**	**0.5**	**1,626,132**	**1,622,020**	**4,112**	**0.3**	**1,547,785**	**1,546,229**	**1,555**	**0.1**

**** Provisional***

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.3336
ANSWERED ON 20.03.2025

CHARGING TIME FOR ELECTRIC VEHICLES

3336. SHRI ZIA UR REHMAN:

Will the Minister of POWER be pleased to state:

(a) whether the Government is cognizant of the fact that the average charging time for Electric Vehicles (EVs) in India is 1.5 to 2 hours, far exceeding global benchmarks of 30 minutes to one hour for fast chargers; and

(b) if so, the details of the steps taken/proposed to be taken by the Government to reduce the charging time for EVs keeping in mind that these delays further erode consumer confidence in transitioning to EVs?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b) : Charging time for electric vehicles depends on several factors such as charger type (or capacity), vehicle battery capacity, efficiency of chargers etc. Therefore, it may vary depending upon change in any of these parameters. The charging durations of some of the electric vehicles, as compiled by Bureau of Energy Efficiency, are at Annexure.

Under FAME-II scheme, Ministry of Heavy Industries, Government of India is establishing fast public charging infrastructure on major highways as well as in cities at fueling stations.

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 3336 ANSWERED IN THE LOK SABHA ON 20.03.2025

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The charging durations of different electric vehicles, available in public domain are as follows: -

Sl. No.	Vehicle type	Vehicle Model	Range (km)	Charging protocol	Charging time
1	e-2W	Ola S1 (E2W-AC-04) – 2.98 kWh	141 km	Ola charger (IS17017-2-6)	~ 1 hr.
2	e-2W	TVS iQUBE ELECTRIC SMART XONNECT – 3.40 kWh	115 km	LEV AC (IS 60309)	~ 1.2 hr.
3	e-2W	Ather 450X – 3.7 kWh	161 km	Ather Grid (IS17017-2-7)	~ 1 to 1.5 hr.
4	e-2W	AtherRizta – 3.7 kWh	159 km	Ather Grid (IS17017-2-7)	~ 1 to 1.5 hr.
5	e-2W	Ultraviolette F77 Mach 2 Recon – 10.3 kWh	323 km	UV Supernova (IS17017-2-6)	~ 1 hr.
6	e-3W	Piaggio Ape E- City FX Max – 8 kWh	145 km	LEV AC (IS 60309)	~ 3 hr 45 mins
7	e-3W	Mahindra Treo HRT – 7.37 kWh	171 km	LEV AC (IS 60309)	~ 3 hr 50 mins
8	e-3W	Bajaj RE E-TEC – 8.9 kWh	178 km	LEV AC (IS 60309)	~ 4 hr 50 mins
9	e-3W	Mahindra Treo Zor - 7.37 kWh	80 km	LEV AC (IS 60309)	~ 3 hr 50 mins
10	e-4W	TATA PUNCH.EV ADV LR ACFC – 35 kWh	365 km	Type-II AC (7 kW) CCS-II DC (50 kW)	AC ~ 5 hr. DC ~ 56 mins
11	e-4W	TATA NEXON.EV – 45 kWh	489 km	Type-II AC (7 kW) CCS-II DC (60 kW)	AC ~ 6hr 36 mins DC ~ 40 mins
12	e-4W	HYUNDAI KONA ELECTRIC – 39.2 kWh	452 km	Type-II AC (7 KW) CCS-II DC (50 kW)	AC ~ 6 hr 10 mins DC ~ 57 mins
13	e-4W	MG ZS EV – 50.3 kWh	461 km	Type-II AC (7 KW) CCS-II DC (50 kW)	AC ~ 8.5 to 9 hr DC ~ 1 hr
14	e-4W	MG Windsor EV Excite – 38 kWh	332 km	Type-II AC (7 KW) CCS-II DC (50 kW)	AC ~ 7.5 hr DC ~ 55 mins
15	e-4W	KIA EV 6 GT Line AWD – 84 kWh	650+ km	CCS-II DC (50 kW)	DC ~ 73 mins

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.3352
ANSWERED ON 20.03.2025

POWER DEMAND SURGE IN ASSAM

3352. SHRI GAURAV GOGOI:

Will the Minister of POWER be pleased to state:

(a) whether the Government is aware that Assam's power demand is expected to increase to seven thousand megawatts by 2041 according to Assam Power Distribution Company Limited and if so, the details thereof;

(b) the current installed power generation capacity in Assam and the projected capacity additions planned to meet future demand;

(c) the key challenges identified by Assam Power Distribution Company Limited in managing this rising demand, including infrastructure, transmission losses and financial constraints;

(d) the measures taken/being taken to enhance power generation, upgrade transmission and distribution infrastructure and ensure affordable electricity supply to consumers in the State; and

(e) whether the Government is considering renewable energy projects and inter-State power purchase agreements to supplement Assam's energy needs, if so, the details thereof?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : As per 20th Electric Power Survey (EPS) report, published by Central Electricity Authority (CEA), energy requirement and peak demand for the State of Assam for the year 2041-42 is estimated to be 33,430 MU and 7,006 MW respectively.

(b) : The current installed generation capacity (allocation based) for Assam is 2,367 MW. The source-wise details are given at Annexure. As per the Resource Adequacy (RA) study for Assam, conducted by power utilities of Assam with support from CEA, the projected contracted capacity required by state of Assam in 2034-35 is likely to be 8,292 MW, which consists of 2,499 MW from Coal, 771 MW from Gas, 1,168 MW from Hydro, 3,304 MW from Solar, 550 MW from Wind. In addition, 915 MW of storage contracts, 1,495 MW from Distributed Renewable Energy (DRE) sources and 1,139 MW from Short term/medium term/ banking arrangement may also be required.

.....2.

(c) to (e) : According to Assam Power Distribution Company Limited's (APDCLs), there is no challenge in arranging power supply in Assam. Adequate power supply arrangement has been made by APDCL through Power Purchase Agreements for 2,500 MW. In addition, APDCL will procure 120 MW from Assam Power Generation Company Limited (APGCL) Lower Kopili Hydro Project, 208 MW from the NHPC Lower Suwansiri Hydro Project, 495 MW thermal power from the Neyveli Uttar Pradesh Power Ltd (NUPPL) Ghatampur, 154 MW from NTPC Talcher and 173 MW from Bhutan's Punatsangchhu Hydro Plant in coming years. Also 500 MW thermal power has been arranged through Tariff Based Competitive Bidding (TBCB) using coal allocation under SHAKTI B (iv) Policy.

Further, in order to enhance power generation, upgrade transmission and distribution infrastructure and to ensure affordable electricity supply to the consumers in Assam, following measures have been taken:

(i) Power generation through New and Renewable Energy:

A. Implementation of 1000 MWp (750 MWAC) Solar Power Plant in the State under "Mukhya Mantri Sauro Shakti Prokolpo" through Asian Development Bank (ADB) funding.

B. Development of 1,000 MW Renewable Power Projects by formation of JV between APDCL and SJVN Green Energy Ltd.

C. Development of 1,000 MW Renewable Power Projects by formation of JV between APDCL and NLC India Ltd.

D. Setting up of 250 MW Battery Energy Storage System (BESS) by formation of JV between APDCL and ONGC Tripura Power Company Ltd.

E. Installation of Rooftop Solar Plants in residential consumers under PM Surya Ghar Muft Bijli Yojana. Number of beneficiaries as on 13.03.2025 is 9,098 and total installed capacity is 28 MW.

F. Procurement of 70 MW Solar power from Grid Connected Ground Mounted Solar PV Project to be developed under Build-Own-Operate (BOO) mode.

G. Procurement of 50 MW Solar power from Grid Connected Ground Mounted Solar PV Project to be developed under Build-Own-Operate (BOO) mode.

H. Procurement of 200 MW Solar power from Grid Connected Ground Mounted Solar PV Project to be developed under Build-Own-Operate (BOO) mode.

I. Procurement of 15 MW Solar power from Grid Connected Ground Mounted Solar PV Project to be developed under Build-Own-Operate (BOO) mode.

.....3.

(ii) To upgrade distribution infrastructure, Govt. of Assam has taken up the "Assam Distribution System Enhancement and Loss Reduction" project in the Assam under Externally Aided Project (EAP) scheme which is being funded by "Asian Infrastructure Investment Bank (AIIB)" for a total project cost of Rs 3,284.04 Crore.

Under this project, 196 nos of new 33/11 kV Sub-stations are under construction along with 2,415 Km of new 33 kV line and 2,272 Km of new 11 kV line in different areas of Assam. High Voltage Distribution System (HVDS) with 3,673 nos. of new Distribution Transformer (DTRs) and associated 1,683 Km of new 11 kV lines are also in progress.

(iii) In addition, Government of India has launched 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. The Scheme has an outlay of Rs. 3,03,758 crore and a Gross Budgetary Support of Rs. 97,631 crores from Government of India over a period of five years from FY 2021-22 to FY 2025-26. Under the scheme, Smart Metering and Distribution Infrastructure works amounting to Rs. 7,444 Cr. have been sanctioned for the State of Assam. These works, inter-alia, include Smart Metering of 63.64 lakh consumers, 77,547 no. of distribution transformers and 2,782 feeders in the State. Further, the Distribution Infrastructure works include re-conductoring of Low Tension (LT) bare conductors, Implementation of High Voltage Distribution System, Bifurcation of 11KV feeders, Replacement of old 11kV and 33KV conductors and addition of new 33kV feeders. As per information available, the Assam Power Distribution Company Ltd. (APDCL) has achieved physical progress of ~41% under the scheme.

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 3352 ANSWERED IN THE LOK SABHA ON 20.03.2025

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The current installed generation capacity (allocation based) in MW for Assam as on February, 2025

Ownership / Sector	Mode wise breakup									Grand Total
	Thermal					Nuclear	Renewable			
	Coal	Lignite	Gas	Diesel	Total		Hydro	RES	Total	
State	0.00	0.00	306.36	0.00	306.36	0.00	100.00	5.01	105.01	411.37
Private	0.00	0.00	0.00	0.00	0.00	0.00	0.00	198.44	198.44	198.44
Central	874.52	0.00	435.56	0.00	1,310.08	0.00	422.08	25.00	447.08	1,757.16
Sub-Total	874.52	0.00	741.92	0.00	1,616.44	0.00	522.08	228.45	750.53	23,66.97

Note: In addition, 302 MW from unallocated pool of Central Generating Station has been allocated to Assam.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.3365
ANSWERED ON 20.03.2025

SHORTAGE OF ELECTRICITY

†3365. SMT. MANJU SHARMA:

Will the Minister of POWER be pleased to state:

(a) whether there is acute shortage of electricity in the country;

(b) if so, the details thereof and the steps taken by the Government to restore normal demand and supply of electricity; and

(c) the strategy adopted by the Government to eliminate the gap between the unit cost ofelectricity supply and price/revenue realisation?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b) : There is adequate availability of power in the country. Present installed generation capacity of the country is 470 GW. Government of India has addressed the critical issue of power deficiency by adding 238 GW of generation capacity since April, 2014 transforming the country from power deficit to power sufficient. Further, addition of 2,01,088 circuit kilometer (ckm) of Transmission lines, 7,78,017 MVA of Transformation capacity and 82,790 MW of Inter-Regional capacity has been done since 2014 with capability of transferring 1,18,740 MW from one corner of the country to another.

The details of All India Power Supply Position of the country during the last three years and current year 2024-25(upto February 2025) are given at Annexure. This indicates that the gap between Energy Requirement and Energy Supplied has declined to marginal level of 0.1% only during current year 2024-25 (upto February, 2025). Even this marginal gap between Energy Requirement and Energy Supplied is generally on account of constraints in the State transmission/distribution network.

Further, Government of India has taken the following steps to ensure adequate availability of power in the country:

(i) In order to augment the power generation capacity, the Government of India has initiated following capacity addition programme:

(A) Government of India has proposed in November 2023 for setting up of an additional minimum 80,000 MW coal based capacity by 2031-32. Against this target, coal based capacity of 9,350 MW has already been commissioned in 2023-24 & 2024-25. 29,900 MW Thermal Capacity is under construction and contracts for 22,640 MW thermal capacity have been awarded in FY 2024-25. Further, 33,580 MW of coal and lignite based candidate capacity has been identified which is at various stages of planning in the country.

.....2.

(B) 13,997.5 MW of Hydro Electric Projects are under construction. Further, 24,225.5 MW of Hydro Electric Projects are under various stage of planning and targeted to be completed by 2031-32.

(C) 7,300 MW of Nuclear Capacity is under construction and targeted to be completed by 2029-30. 7,000 MW of Nuclear Capacity is under various stages of planning and approval.

(D) 1,53,920 MW Renewable Capacity including 84,310 MW of Solar, 28,280 MW of Wind and 40,890 MW Hybrid power is under construction while 70,210 MW of Renewable Capacity including 46,670 MW of Solar, 600 MW of Wind and 22,940 MW Hybrid Power is at various stages of planning and targeted to be completed by 2029-30.

(E) In energy storage systems, 13,050 MW/78,300 MWh Pumped Storage Projects (PSPs) are under construction/concurred and 14,970 MW/54,803 MWh Battery Energy Storage System (BESS) are currently under various stages of construction/bidding.

(ii) A robust national grid has been established to facilitate the transfer of power from power surplus regions to power deficit regions. Addition of 2,01,088 circuit kilometer (ckm) of Transmission lines, 7,78,017 MVA of Transformation capacity and 82,790 MW of Inter-Regional capacity has been done since 2014 with capability of transferring 1,18,740 MW from one corner of the country to another. The capacity of National Grid is being expanded on a continuous basis commensurate with the growth in electricity generation and electricity demand.

(iii) Directions under Section 11 of Electricity Act have been issued to imported coal based plants to operate and generate power to their full capacity.

(iv) Steady supply of coal to all the thermal power plants is being ensured to prevent fuel shortages.

(v) Gas-based power plants of NTPC as well as other generators are being scheduled during high power demand period.

(vi) All the GENCOs including IPPs and Central generating stations have been advised to generate and maintain full availability on daily basis excluding the period of planned maintenance or forced outage.

(vii) Hydro based generation is being scheduled in a manner so as to conserve water for meeting demand during peak period.

(viii) Planned maintenance of generating units is being minimized during period of high demand.

(ix) New power generation capacity is being monitored closely for timely addition.

(x) Government has facilitated power trading through regulatory framework whereby states with surplus generation can sell power to states which are in deficit through three (3) power exchanges viz. Indian Energy Exchange (IEX), Power Exchange India Ltd (PXIL) and Hindustan Power Exchange Ltd.

.....3.

(xi) Electricity market has been reformed by adding the Real Time Market (RTM), Green Day Ahead Market (GDAM), Green Term Ahead Market (GTAM), High Price Day Ahead Market (HPDAM) in Power exchange. Also, there is DEEP portal for e-bidding and e-Reverse for procurement of short-Term power by DISCOMs.

(c) : In order to reduce the gap between unit cost of supply and unit rate of realization, the Government of India has taken number of measures / initiatives including the following:

(i) Revamped Distribution Sector Scheme (RDSS) has been launched with the objective of improving the quality and reliability of power through a financially sustainable and operationally efficient Distribution Sector. The release of funds under the scheme is linked to States/ Distribution Utilities taking necessary measures for improving their financial performance including the improvements made in parameters of Aggregate Technical & Commercial (AT&C) losses and the Gap between Average Cost of Supply (ACoS) and Average Revenue Realised (ARR).

(ii) Timely issuance of tariff and true up orders through regular follow up.

(iii) Timely payment of GENCO dues have been ensured through Late Payment Surcharge (LPS) Rules.

(iv) Additional Prudential Norms have been mandated for providing loans to State Power utilities.

(v) Scheme for allowing Additional borrowing space of 0.5% of Gross State Domestic Product (GSDP) linked to reforms adopted and performance achieved against various parameters.

(vi) Rules and Standard Operating Procedure have been framed for timely payment of subsidies declared by the State Governments.

(vii) Rules have also been framed 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 are passed through.

With the collective efforts of Centre and State/UTs, the Gap between Average Cost of Supply (ACS) and Average Revenue Realized (ARR) has been reduced from Rs. 0.71/kWh to Rs.0.19/kWh in the period FY 21 to FY 24

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 3365 ANSWERED IN THE LOK SABHA ON 20.03.2025

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The details of All India power supply position during the last three years and current year (upto February 2025):

Year	ENERGY			
	Energy Requirement	Energy Supplied	Energy Not Supplied	
	(MU)	(MU)	(MU)	%
2021-22	1,379,812	1,374,024	5,787	0.4
2022-23	1,513,497	1,505,914	7,583	0.5
2023-24	1,626,132	1,622,020	4,112	0.3
2024-25* (upto February, 2025)	1,547,785	1,546,229	1,555	0.1

***Data for February, 2025, is Provisional.**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.3387
ANSWERED ON 20.03.2025

ELECTRICITY CONSUMPTION

3387. SHRI TATKARE SUNIL DATTATREY:

Will the Minister of POWER
be pleased to state:

(a) whether India's electricity consumption is expected to triple by the year 2050 according to an annual World Energy Outlook report from the International Energy Agency which projects that India would become the third-largest electricity consumer globally by mid-century driven by annual demand growth of over four percent, if so, the details thereof; and

(b) the steps taken/proposed to be taken by the Government to achieve the anticipated target reported by the International Energy Agency?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : As per the World Energy Outlook 2024 published by International Energy Agency, India would become third largest electricity consumer in the world by the year 2050 on the back of growth in demand of over 4% a year in all scenarios. The report mentions that India is poised to experience more energy demand growth than any other country over the next decade. Report also indicates that India will have world's third-largest installed battery storage capacity in place by 2030 to accommodate the rising share of variable renewables.

(b) : Central Electricity Authority (CEA) conducts Electric Power Survey (EPS) in every five years for estimating the power demand of each State/UT (including Mega City) of the Country. The last EPS report i.e, 20th EPS report was published in November, 2022 which covers the electricity demand projections for the year 2021-22 to 2031-32 as well as perspective electricity demand projection for the year 2036-37 and 2041-42 for the country. The details of projected demand in terms of Peak and energy requirement are given at Annexure.

Subsequently, National Electricity Plan (NEP) is prepared by CEA every five year for Generation and Transmission. NEP Generation covers the incremental capacity requirement to meet the projected load and energy requirement. The last NEP Generation Report 2022-32, published in May 2023, includes detailed capacity addition requirement during the years 2022-27 and Perspective Plan projections for the years 2027-32.

In accordance with NEP, the Government of India has proactively undertaken several measures along with existing initiatives to ensure the adequacy of generation and transmission resources. These, inter-alia, include the following:

.....2.

1. Generation Planning:

(i) Present installed generation capacity of the country is 470 GW. Installed generation capacity in 2031-32 is likely to be 874 GW. This includes capacity from conventional sources- Coal, Lignite etc., renewable sources- Solar, Wind and Hydro etc.

(ii) With a view to ensure generation capacity remains ahead of projected peak 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.

(iii) All the States were advised to initiate process for creation of generation capacities; from all generation sources, as per their Resource Adequacy Plans.

(iv) In order to augment the power generation capacity, the Government of India has initiated following capacity addition programme:

A. Government of India has proposed in November 2023 for setting up of an additional minimum 80,000 MW coal-based capacity by 2031-32. Against this target, coal-based capacity of 9,350 MW has already been commissioned in 2023-24 & 2024-25. 29,900 MW Thermal Capacity is under construction and contracts for 22,640 MW thermal capacity have been awarded in FY 2024-25. Further, 33,580 MW of coal and lignite-based candidate capacity has been identified which is at various stages of planning in the country.

B. 13,997.5 MW of Hydro Electric Projects are under construction. Further, 24,225.5 MW of Hydro Electric Projects are under various stage of planning.

C. 7,300 MW of Nuclear Capacity is under construction and targeted to be completed by 2029-30. 7,000 MW of Nuclear Capacity is under various stages of planning and approval.

D. 1,53,920 MW Renewable Capacity including 84,310 MW of Solar, 28,280 MW of Wind and 40,890 MW Hybrid power is under construction while 70,210 MW of Renewable Capacity including 46,670 MW of Solar, 600 MW of Wind and 22,940 MW Hybrid Power is at various stages of planning and targeted to be completed by 2029-30.

E. In energy storage systems, 13,050 MW/78,300 MWh Pumped Storage Projects are under construction/concurred and 14,970 MW/54,803 MWh Battery Energy Storage System are currently under various stages of construction/bidding.

2. Transmission Planning:

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 1274 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.

.....3.

3. Promotion of Renewable Energy Generation:

(i) Ministry of New & Renewable Energy (MNRE) has issued Bidding Trajectory for issuance of RE power procurement bids of 50 GW/annum by Renewable Energy Implementing Agencies from FY 2023-24 to FY 2027-28.

(ii) Foreign Direct Investment (FDI) has been permitted up to 100 percent under the automatic route.

(iii) 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, for Green Hydrogen Projects till December, 2030 and for offshore wind projects till December, 2032.

(iv) To boost 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 for non-compliance.

(v) 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.

(vi) Schemes such as Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM), PM Surya Ghar Muft Bijli Yojana, National Programme on High Efficiency Solar PV Modules, National Green Hydrogen Mission, Viability Gap Funding (VGF) Scheme for Offshore Wind Energy Projects have been launched.

(vii) Scheme for setting up of Ultra Mega Renewable Energy Parks is being implemented to provide land and transmission to RE developers for installation of RE projects at large scale.

(viii) Laying of new transmission lines and creating new sub-station capacity has been funded under the Green Energy Corridor Scheme for evacuation of renewable power.

(ix) "Strategy for Establishment of Offshore Wind Energy Projects" has been issued indicating a bidding trajectory of 37 GW by 2030 and various business models for project development.

(x) The Offshore Wind Energy Lease Rules, 2023 have been notified vide Ministry of External Affairs notification dated 19th December 2023, to regulate the grant of lease of offshore areas for development of offshore wind energy projects.

(xi) To achieve the objective of increased domestic production of Solar PV Modules, the Govt. of India is implementing the Production Linked Incentive (PLI) scheme for High Efficiency Solar PV Modules. This will enable manufacturing capacity of Giga Watt (GW) scale in High Efficiency Solar PV Module

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 3387 ANSWERED IN THE LOK SABHA ON 20.03.2025

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The detail of projected demand as per 20th EPS survey:

FY	Energy Requirement (BU)	Peak Electricity Demand (GW)
2031-32*	2474	366
2036-37	3095	466
2041-42	3776	575

*** As per mid-term review of 20th EPS, the projected peak demand and energy requirement on FY 2031-32 will be 388 MW and 2703 BU respectively.**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.3410
ANSWERED ON 20.03.2025

AGGREGATE TECHNICAL AND COMMERCIAL LOSSES

3410. DR. INDRA HANG SUBBA:

Will the Minister of POWER be pleased to state:

(a) the details of percentage of the total outlay utilised under the Revamped Distribution Sector Scheme (RDSS);

(b) whether the scheme's aim to reduce the Aggregate Technical and Commercial losses to pan-India levels of 12-15% has been achieved; and

(c) if so, the details thereof and if not, the reasons therefor?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : Government of India, in July 2021, launched the Revamped Distribution Sector Scheme (RDSS) so as to supplement efforts of States/UTs to improve the quality and reliability of power supply to consumers through a financially sustainable and operationally efficient Distribution Sector. The scheme aims to reduce the Aggregate Technical and Commercial (AT&C) losses to pan-India levels of 12-15% and the Average Cost of Supply and Average Revenue Realized (ACS-ARR) Gap to zero.

The Scheme has an outlay of Rs. 3,03,758 crore and a Gross Budgetary Support (GBS) of Rs. 97,631 crores from Government of India over a period of five years from FY 2021-22 to FY 2025-26. Till now, Projects worth Rs. 2.79 lakh crore (~92%) have been sanctioned and GBS of Rs. 26,312 crore (27%) has been released under the scheme.

.....2.

(b) & (c) : As a result of collective effort of the Central and State/UT Governments, the Aggregate Technical and Commercial (AT&C) losses at the pan-India level have come down from 21.9% in FY 21 to 16.28% in FY 24. The State/UT wise details are attached as Annexure.

This reduction in losses is a result of a number of reforms and measures, including the RDSS, which are as under:

i. **Additional borrowing space of 0.5% of Gross State Domestic Product (GSDP) is allowed to the State if the distribution utility implements performance improvement measures.**

ii. **Additional Prudential Norms for sanctioning of loans to State owned Power Utilities contingent on the evaluation of performance of Power Distribution Utilities against prescribed parameters.**

iii. **Rules for implementation of Fuel and Power Purchase Cost Adjustment (FPPCA) and cost reflective tariff have been notified for ensuring that all prudent costs for supply of electricity are passed through.**

iv. **Rules and Standard Operating Procedure issued for proper Subsidy Accounting and their timely payment.**

v. **Mandating automatic Energy Accounting and Audit.**

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PARTS (b) & (c) OF UNSTARRED QUESTION NO. 3410 ANSWERED IN THE LOK SABHA ON 20.03.2025

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State-wise AT&C Loss (%)

States/ UTs	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Andaman & Nicobar Islands	8.89	19.80	19.77	20.76
Andhra Pradesh	20.42	10.56	7.74	12.05
Arunachal Pradesh	51.82	47.83	51.70	50.42
Assam	18.73	16.95	16.22	14.03
Bihar	34.40	33.94	23.45	20.32
Chandigarh	13.81	NA	NA	NA
Chhattisgarh	18.05	18.13	16.14	15.88
Delhi (NDMC)	24.83	8.33	10.67	23.34
Goa	12.89	12.79	17.09	8.30
Gujarat	11.56	9.70	10.67	9.12
Haryana	17.46	14.06	12.01	11.30
Himachal Pradesh	14.02	12.90	10.57	10.98
Jammu & Kashmir	59.28	NA	NA	NA
Jharkhand	43.09	30.85	27.46	31.17
Karnataka	15.97	11.51	14.19	12.01
Kerala	7.83	8.08	6.87	8.82
Ladakh		48.29	38.61	42.46
Lakshadweep	11.63	NA	NA	NA
Madhya Pradesh	41.72	21.36	20.45	23.28
Maharashtra	27.68	15.21	16.97	23.85
Manipur	24.56	24.28	13.82	13.41
Meghalaya	23.37	29.75	17.75	17.51
Mizoram	29.05	36.45	26.53	39.19
Nagaland	47.08	43.26	47.28	47.11
Puducherry	20.12	14.20	21.83	17.75
Punjab	18.54	11.67	11.26	10.96
Rajasthan	26.18	17.49	15.44	22.08
Sikkim	98.35	30.77	36.10	54.60
Tamil Nadu	11.78	11.44	10.31	12.92
Telangana	13.33	10.65	18.65	19.17
Tripura	37.36	24.97	24.91	24.22
Uttar Pradesh	27.11	31.10	22.18	16.39
Uttarakhand	15.39	14.15	15.34	14.65
West Bengal	21.34	16.67	17.32	17.11
Private Sector	13.86	13.51	10.76	12.12
Grand Total	21.90	16.18	15.07	16.28

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.3437
ANSWERED ON 20.03.2025

PUBLIC CHARGING STATIONS FOR EVs

3437. DR. KAKOLI GHOSH DASTIDAR:

Will the Minister of POWER be pleased to state:

(a) whether the Government has issued any guidelines for establishing the ceiling cost for supply of electricity from public charging stations to the electric vehicles;

(b) if so, the details thereof; and

(c) the key highlights of any monitoring or evaluation of such guidelines and the follow-up by the Government to further promote their adoption by the States?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b): Ministry of Power has issued Guidelines for Installation and Operation of Electric Vehicle Charging Infrastructure-2024" in September, 2024 which include following suggestions regarding the ceiling cost for supply of electricity from public charging station:

i. **Total fee charged by any individual/entity operating the Electric Vehicle (EV) Charging Station would comprise the electricity supply tariff, service charge, land cost and applicable GST.**

ii. **The tariff for supply of electricity to EV Charging Stations to be single-part tariff and not to exceed "Average Cost of Supply (ACoS)" till 31st March 2028. The Distribution Licensee may charge 0.7 times the ACoS during solar hours (9 am to 4 pm) and 1.3 times ACoS during non-solar hours (remaining hours of the day). As per the data available with Bureau of Energy Efficiency (BEE), the list of States and UTs where tariff for supply of electricity to Public EV Charging Stations is single part not exceeding Average Cost of Supply is enclosed at ANNEXURE.**

.....2.

iii. **For AC charging a maximum service fee of Rs 3.0 per unit of electricity during solar hours and Rs 4.0 per unit of electricity during non-solar hours would be applicable for charging at public and community charging stations. Similarly, for DC charging a maximum service fee of Rs 11.0 per unit of electricity during solar hours and Rs 13.0 per unit of electricity during non-solar hours would be applicable for charging at public and community charging station.**

(c) : As per the aforementioned guidelines, BEE has been entrusted to act as the Central Nodal Agency to monitor the implementation of these guidelines.

Further, States have been advised to designate a State Nodal Agency to coordinate with DISCOMs and respective State Electricity Regulatory Commission for facilitating electricity connection for public, community, workplace and e-bus depot charging stations. States have also been advised to constitute a State Level Steering Committee headed by Secretary in-charge of Energy, comprising of secretaries of Transport, Municipal Administration and Urban Development, such other members as required to plan and monitor the implementation of EV Charging Infrastructure at the state level.

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 3437 ANSWERED IN THE LOK SABHA ON 20.03.2025

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States/ UTs where tariff for supply of electricity to Public EV Charging Stations is single part not exceeding Average Cost of Supply

Sl. No.	State Name	Electricity Supply tariff (EV) to PCS (₹/unit)	
		LT	HT
1	Andaman & Nicobar	12.0	12.0
2	Andhra Pradesh	6.7	6.7
3	Arunachal Pradesh	5.0	11 KV: 4.2, 33KV: 4.0
4	Bihar	8.72	7.85
5	Chandigarh	3.8	3.6
6	Chhattisgarh	6.92	6.92
7	Delhi	4.5	4.0
8	Goa	4.75	4.75
9	Haryana	6.48	6.12
10	Lakshwadeep	7.8	7.8
11	Madhya Pradesh	6.9	6.9
12	Meghalaya	8.5	8.5
13	Odisha	5.0	5.0
14	Puducherry	5.75	5.75
15	Punjab	6.28	6.28
16	Telangana	6.0	6.0
17	UT OF D&NH AND D&D	5.1	4.9
18	Uttarakhand	7.0	7.0
19	West Bengal	6.0	6.0

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.3442
ANSWERED ON 20.03.2025

DISTRESSED POWER PROJECTS

†3442. SHRI SANJAY UTTAMRAO DESHMUKH:

Will the Minister of POWER
be pleased to state:

(a) whether the Government has identified various distressed power projects in the public and private sectors;

(b) if so, the details thereof, State/Union Territory, company, project and capacity-wise;

(c) the number of such projects acquired by other public and private sector companies during the last three years and the current year, company and project-wise;

(d) whether the banks as well as cash-rich public sector companies have been asked to issue an instruction to reconstruct funds for purchasing shares of such distressed power companies; and

(e) if so, the details thereof and the response of these banks/companies?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b) : 49 power projects had been identified with a total capacity of ~47.5 GW as stressed assets. The details of these projects indicating their present status are given at Annexure-I.

(c) : Out of these 49 stressed projects, 30 projects have been resolved, which includes 15 projects acquired by other public and private sector companies in last three years and the current year, as per the details given at Annexure-II. Further, 9 projects are in the process of resolution.

(d) & (e) : Ministry of Power had issued an advisory on 01.11.2023 to all States/GENCOS to participate in Corporate Insolvency Resolution Process (CIRP) of National Company Law Tribunal (NCLT) for taking over stressed power assets.

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ANNEXURE-I

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 3442 ANSWERED IN THE LOK SABHA ON 20.03.2025

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Details of Stressed Projects

S. No.	Name of the Project	State	Capacity (MW)
(I) Projects Resolved -			
1	Simhapuri Energy Limited	Andhra Pradesh	600
2	Kanti Bijli Utpadan Nigam Limited -NTPC	Bihar	390
3	DB Power Limited	Chhattisgarh	1200
4	Korba West Power Company Ltd	Chhattisgarh	600
5	GMR Chhattisgarh	Chhattisgarh	1370
6	RKM Powergen Limited	Chhattisgarh	1440
7	Athena Chhattisgarh Power Ltd	Chhattisgarh	1200
8	Adhunik Power Limited	Jharkhand	540
9	Essar Power Mahan Limited	Madhya Pradesh	1200
10	Jaypee Bina MP	Madhya Pradesh	500
11	Jaypee Nigrie	Madhya Pradesh	1320
12	Avantha Jhabua Power Ltd.	Madhya Pradesh	600
13	Adani Power Maharashtra Ltd	Maharashtra	3300
14	GMR Warora Energy Limited	Maharashtra	600
15	GMR Kamalanga Limited	Odisha	1050
16	Jindal India Thermal Power Ltd.	Odisha	1200
17	Ind Barath Utkal Limited	Odisha	700
18	Lanco Anpara	Uttar Pradesh	1200
19	Prayagraj Power Gen. Corp. Ltd.	Uttar Pradesh	1980
20	DVC Raghunathpur	West Bengal	1200
21	GVK Goindwal Sahib Power Plant	Punjab	540
22	Monnet Power Co. Ltd.	Odisha	1050
23	KSK Mahanadi Power Co. Ltd.	Chhattisgarh	3600
24	Lanco Amarkantak Power Ltd.	Chhattisgarh	1920
25	SKS Power Ltd.	Chhattisgarh	1200
26	Amrit Jal Ventures Pvt. Ltd	Andhra Pradesh	1
27	VS Lignite Power Pvt. Ltd	Rajasthan	135
28	Meenakshi Energy Pvt Ltd	Andhra Pradesh	1000
29	Nagai Power Pvt Ltd	Tamil Nadu	150
30	Corporate Power Limited	Jharkhand	540
	Sub Total		32326

(II) Projects Likely to be resoved (under NCLT or Outside) -			
1	**Rattan India Power Limited - Nasik [Sinnar TPP]**	**Maharashtra**	**1350**
2	**Coastal Energen Pvt. Ltd.**	**Tamil Nadu**	**1200**
3	**TRN Energy Private Limited**	**Chhattisgarh**	**600**
4	**Hiranmaye Energy Limited**	**West Bengal**	**450**
5	**Bhadreshwar Vidyut Private Limited**	**Gujarat**	**300**
6	**Global Metal & Energy Private Limited**	**Maharashtra**	**10**
7	**Srikanth Energy**	**Maharashtra**	**2**
8	**Bhavnagar Biomass Power Projects Private Ltd**	**Gujarat**	**10**
9	**Shree Maheshwar Hydel Power Company Ltd**	**Madhya Pradesh**	**400**
	Sub Total		**4322**
(III) Un-viable Projects/Under Liquidation			
1	**East Coast Energy Pvt. Ltd. (Athena)**	**Andhra Pradesh**	**1320**
2	**Essar Power Jharkhand Limited**	**Jharkhand**	**1200**
3	**Lanco Babandh**	**Odisha**	**1320**
4	**Vandana Vidyut Limited**	**Chhattisgarh**	**270**
5	**Visa Power Limited**	**Chhattisgarh**	**1200**
6	**KVK Nilanchal Power Limited**	**Odisha**	**1050**
7	**Lanco Vidarbh Power Limited**	**Maharashtra**	**1320**
8	**Ind-Barath Power (Madras) Limited**	**Tamil Nadu**	**660**
9	**Jas Infrastructure Capital Private Limited**	**Bihar**	**1320**
10	**Konaseema Gas Power Limited**	**Andhra Pradesh**	**445**
	Sub Total		**10105**
	Total		**47563**

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ANNEXURE-II

ANNEXURE REFERRED IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 3442 ANSWERED IN THE LOK SABHA ON 20.03.2025

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Details of stressed projects acquired by other public and private sector companies during last three years and this year

S No.	Project	Company
Acquired by Public Sector Companies		
1	Jhabua Power Ltd.	NTPC Ltd.
2	GVK Goindwal Sahib Power Plant	Punjab State Power Corporation Limited (PSPCL)
Acquired by Private Sector Companies		
1	SKS Power Ltd.	Sarda Energy & Minerals Limited (SEML)
2	Ind Barath Utkal Ltd.	JSW Energy Limited
3	KSK Mahanadi Power Co. Ltd	JSW Energy Limited
4	Monnet Power Co. Ltd.	Jindal Steel & Power
5	Athena Chhattisgarh Power Ltd.	Vedanta Limited
6	Simhapuri Energy Ltd.	Jindal Power Limited
7	Essar Power Mahan Ltd.	Adani Power Limited
8	Lanco Anpara	Megha Engineering & Infrastructure Ltd.
9	Amrit Jal Ventures Pvt. Ltd	Consortium of Sh. Ashok Surana, Syamali Security & Consultancy Private Limited & Sh. Nagesh Goenka
10	VS Lignite Power Pvt. Ltd	Sherisha Technologies
11	Meenakshi Energy Pvt Ltd	Vedanta Limited
12	Lanco Amarkantak Power Limited	Adani Power Limited
13	Nagai Power Pvt Ltd	Smartgen Infra Pvt Limited

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