RAJYA SABHA STARRED QUESTION NO.68 ANSWERED ON 02.12.2024

NATIONAL ELECTRICITY PLAN

68 # SHRI MAYANKBHAI JAYDEVBHAI NAYAK:

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

(a) the details of the National Electricity Plan and the capacity that Government intends to achieve by the year 2032; and

(b) the role of the power sector in achieving this goal?

ANSWER

THE MINISTER OF POWER

(SHRI MANOHAR LAL)

(a) & (b): A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) & (b) IN RESPECT OF RAJYA SABHA STARRED QUESTION NO.68 FOR REPLY ON 02.12.2024 REGARDING NATIONAL ELECTRICITY PLAN ASKED BY SHRI MAYANKBHAI JAYDEVBHAI NAYAK. ********

(a) & (b): Section 3(4) of Electricity Act, 2003 stipulates that, the Central Electricity Authority (CEA) shall prepare a National Electricity Plan in accordance with the National Electricity Policy and notify such plan once in five years. Accordingly, CEA has been preparing NEP from time to time covering detailed and perspective plans for different time periods. The fourth National Electricity Plan prepared by CEA includes a review of the period 2017-22, detailed capacity addition requirement during the years 2022-27 and Perspective Plan projections for the years 2027-32.

2. As per the Fourth National Electricity Plan (Volume I: Generation), to meet the projected peak demand of around 366 GW and energy requirement of 2474 BU of the country, the installed Capacity for the year 2031-32 is likely to be around 900 GW, which comprises of 304 GW of conventional capacity and 596 GW of Renewable based Capacity along with Battery Energy Storage Systems (BESS) capacity of 47GW/236 GWh.

3. As per the National Electricity Plan (Volume-II: Transmission), about 1,91,474 Circuit Kilometer (ckm) of transmission lines and 1274 Giga Volt Ampere (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. With this planned addition, the total transmission lines and total transformation capacity (at 220 kV and above voltage level) by 2031-32 is likely to be around 6,48,190 ckm and 2345 GVA, respectively. Additionally, 33.25 GW of HVDC bi-pole links are also planned to be added during the period from 2022-23 to 2031-32. Thus, total HVDC capacity by 2031-32 is likely to be around 66.75 GW. The inter-regional transmission capacity is planned to increase to 168 GW by the year 2031-32, from the present level of 119 GW.

4. To achieve the above targets, Government is taking requisite steps for addition of generation capacity in a time bound manner. Central and State Public Sector Undertakings as well as private sector entities have to take action for adding the required generation and transmission capacity. To ensure adequate generation capacity, Ministry of Power (MoP) has notified Resource Adequacy (RA) Rules and Guidelines. These rules mandate notification of Regulations by State Commissions and preparation of a Long-term National Resource Adequacy Plan by the Central Electricity Authority. Based on these Rules, Regulations and Guidelines Distribution licensees are required to prepare their RA plan and tie up adequate generation capacity to meet the demand.

RAJYA SABHA STARRED QUESTION NO.73 ANSWERED ON 02.12.2024

IMPACT OF REVAMPED DISTRIBUTION SECTOR SCHEME

73 SHRI KARTIKEYA SHARMA:

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

(a) the impact of the Revamped Distribution Sector Scheme (RDSS) on the country's power sector, including but not limited to the financial support provided to DISCOMs, if so, the details thereof;

(b) under the scheme number of smart meters that have been installed in the urban and rural areas across India, if so, the State-wise details thereof; and

(c) the benefits accrued to the consumers especially to the farmers and the lower-income groups from installing these smart meters?

ANSWER

THE MINISTER OF POWER

(SHRI MANOHAR LAL)

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

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) IN RESPECT OF RAJYA SABHA STARRED QUESTION NO.73 FOR REPLY ON 02.12.2024 REGARDING IMPACT OF REVAMPED DISTRIBUTION SECTOR SCHEME ASKED BY SHRI KARTIKEYA SHARMA.

(a).Revamped Distribution Sector Scheme (RDSS) was launched by the Government of India, in July 2021 with a total outlay of Rs 3,03,758 Cr including Gross Budgetary Support (GBS) of Rs. 97,631 Cr. Improvement in financial sustainability and operational efficiency of the DISCOMs/Power Departments, i.e. distribution utilities, is one of the key objectives of the RDSS. The scheme envisages reducing the Aggregate Technical and Commercial (AT&C) losses to 12-15% and Gap between Average Cost of Supply and Average Revenue Realised (ACS-ARR Gap) to Zero at pan-India level by 2024-25.

The scheme is designed to nudge the States/utilities to undertake necessary reforms for desired results. Based on performance of the utility against parameters mentioned under Result Evaluation Matrix of the RDSS, which include achievement against major financial & operational parameters, they are evaluated. Thus, assistance has been linked to performance.

To bring in the much needed financial discipline, there is a pre-qualification criteria under the scheme which includes timely payment of subsidy and Government department dues, no fresh creation of regulatory assets, timely publishing of financial accounts, timely filing of tariff/ true-up petitions and issuance of tariff/ true up orders etc.

Further, projects worth Rs. 2.77 lakh crore have been sanctioned under RDSS for loss reduction and smart metering works. Sanctioned works are at various stages of implementation and physical progress of $\sim 17\%$ has been achieved till date.

With collective effort of Centre and States/UTs, at the national level the AT&C loss of distribution utilities has reduced from 22.32% in FY2021 to 15.37% in FY2023 and the ACS-ARR gap has reduced from Rs. 0.69/kWh in FY2021 to Rs. 0.45/kWh in FY2023.

(b): State-wise details of smart meters installed in the urban and rural areas across India under RDSS are given at Annexure.

(c): Implementation of smart meters will provide several benefits to both DISCOMs and consumers. Some of the benefits a consumer will receive after shifting to smart metering system are as below:

- i. Smart meter allows tracking of consumption pattern and helps consumers to plan and manage their energy consumption.
- ii. Increased accuracy of meter reading by eliminating human errors associated with manual meter reading.
- iii. Prepaid billing helps economically weaker section of consumers to budget their resources more efficiently and recharge with smaller amounts as per their convenience.
- iv. Rebate on electricity bills to prepaid smart meter consumer.
- v. Facilitate net-metering for roof-top solar installation.

Under RDSS, smart meter installation is not mandated for farmers.

ANNEXURE REFERRED TO IN PART (b) OF THE STATEMENT LAID IN REPLY TO STARRED QUESTION NO.73 ANSWERED IN THE RAJY SABHA ON 02.12.2024 REGARDING IMPACT OF REVAMPED DISTRIBUTION SECTOR SCHEME

State	Consumer	Metering	DT M	etering	Feeder Metering		Total
	Rural	Urban	Rural	Urban	Rural	Urban	
Assam	18,27,154	4,62,294	38,047	0	1,865	713	23,30,073
Andhra Pradesh	2,35,733	1,50,241	0	13	54	805	3,86,846
Bihar	0	19,39,428	14,314	5,882	3,779	804	19,64,207
Chhattisgarh	1,28,268	4,32,937	8,796	13,268	2,642	2,565	5,88,476
Gujarat	55,096	1,64,336	7,346	23,247	0	0	2,50,025
Himachal Pradesh	13,343	29,578	59	300	103	31	43,414
Jammu and Kashmir	400	600	0	0	0	99	1,099
Manipur	0	77	0	0	0	0	77
Madhya Pradesh	11,287	10,01,965	0	5,411	0	1,479	10,20,142
Maharashtra	57,170	2,97,870	20,385	29,657	18,717	6,656	4,30,455
Sikkim	880	581	0	0	0	88	1,549
Tamil Nadu	0	0	0	0	50	530	580
Tripura	0	0	0	0	0	83	83
Uttarakhand	0	7	311	656	699	845	2,518
Uttar Pradesh	32,315	3,46,690	7,572	7,586	11,321	9,649	4,15,133
West Bengal	64,027	44,932	0	0	0	0	1,08,959
Total	24,25,673	48,71,536	96,830	86,020	39,230	24,347	75,43,636

State-wise details of smart meters installed under RDSS

RAJYA SABHA UNSTARRED QUESTION NO.789 ANSWERED ON 02.12.2024

FINANCIAL LOSSES TO DISCOMS

789 SHRI RAGHAV CHADHA:

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

(a) whether Ministry is aware that State-owned electricity distribution companies (DISCOMS) incurred financial losses of \gtrless 68,832 crore in 2022-23, and primary reasons attributed to this substantial increase compared to previous years, the details thereof;

(b) whether Ministry could specify cumulative financial losses recorded by DISCOMS over the last five years and the specific States most affected by these losses;

(c) whether Government has reviewed existing schemes or introduced new measures to address these growing financial losses and improve operational efficiency of DISCOMS; and

(d) steps being taken to ensure that DISCOMS' financial performance aligns with objectives of power sector reforms?

ANSWER

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): Yes. The primary reason for increase in financial losses of State owned Power Distribution Companies (DISCOMs)/ Power Departments, i.e. Power Distribution Utilities, in FY2023 was non-implementation of Fuel and Power Purchase Cost Adjustment (FPPCA). Other major reasons for revenue losses of Power Distribution Utilities include delay in tariff orders, poor billing and collection efficiencies, under-recovery of electricity dues of State Government departments and the subsidy amounts.

(b): State wise Accumulated Surplus/ (Deficit) of Power Distribution Utilities from FY 2018-19 to FY 2022-23 are placed at Annexure.

(c) & (d) : Government of India (GoI) has been supporting the Power Distribution Utilities to improve their performance through various initiatives. Some of the key initiatives taken are as under:

i. Revamped Distribution Sector Scheme (RDSS) 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 to improve their financial performance.

- ii. Additional Borrowing space of 0.5% of GSDP to State Governments, which is conditional on them undertaking specific reforms in the power sector.
- iii. Additional Prudential Norms for sanctioning of loans to State owned Power Utilities which would be contingent to the performance of Power Distribution Utilities against prescribed conditions.
- iv. Rules for implementation of FPPCA and Cost reflective tariff so as to ensure that all prudent cost for supply of electricity are passed through.
- v. Rules and Standard Operating Procedure issued for proper Subsidy Accounting and their timely payment.

With collective effort of Centre and States/UTs, the Aggregate Technical and Commercial (AT&C) loss of distribution utilities at the national level has reduced from 25.5% in FY 2013 to 15.37% in FY 2023 and the Gap between Average Cost of Supply and Average Revenue Realised (ACS-ARR Gap) has reduced from Rs. 0.84/kWh in FY 2013 to Rs. 0.45/kWh in FY 2023.

ANNEXURE

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 789 ANSWERED IN THE RAJYA SABHA ON 02.12.2024 ****

Accumulated Surplus/ (Deficit) of Power Distribution Utilities

Acc	Accumulated Surplus/ (Deficit) of Power Distribution Utilities					
				Fi	gures in Rs Cr	
	As on March	As on March	As on March	As on March	As on March	
	31, 2019	31, 2020	31, 2021	31, 2022	31, 2023	
State Sector	(4,84,405)	(5,11,784)	(5,66,426)	(6,09,034)	(6,76,681)	
Andhra Pradesh	(29,147)	(29,143)	(28,707)	(31,195)	(29,218)	
APCPDCL	-	-	(9,407)	(10,208)	(9,726)	
APEPDCL	(7,974)	(7,971)	(7,539)	(7,172)	(6,911)	
APSPDCL	(21,173)	(21,172)	(11,761)	(13,815)	(12,581)	
Assam	(1,913)	(959)	(1,229)	(893)	(1,699)	
APDCL	(1,913)	(959)	(1,229)	(893)	(1,699)	
Bihar	(12,258)	(14,673)	(17,160)	(19,537)	(19,322)	
NBPDCL	(3,888)	(4,670)	(5,846)	(6,881)	(7,089)	
SBPDCL	(8,370)	(10,003)	(11,315)	(12,656)	(12,234)	
Chattisgarh	(6,318)	(7,290)	(7,710)	(8,924)	(10,057)	
CSPDCL	(6,318)	(7,290)	(7,710)	(8,924)	(10,057)	
Gujarat	988	79	436	798	935	
DGVCL	534	298	402	493	546	
MGVCL	356	244	290	393	418	
PGVCL	(172)	(577)	(431)	(341)	(300)	
UGVCL	270	114	175	252	272	
Haryana	(29,309)	(28,978)	(28,341)	(28,404)	(28,165)	
DHBVNL	(13,695)	(13,581)	(13,342)	(13,322)	(13,194)	
UHBVNL	(15,614)	(15,396)	(14,999)	(15,082)	(14,971)	
Himachal Pradesh	(1,532)	(1,521)	(1,706)	(1,810)	(3,246)	
HPSEBL	(1,532)	(1,521)	(1,706)	(1,810)	(3,246)	
Jharkhand	(5,127)	(6,261)	(9,183)	(11,556)	(15,175)	
JBVNL	(5,127)	(6,261)	(9,183)	(11,556)	(15,175)	
Karnataka	(3,794)	(5,645)	(9,821)	(14,413)	(17,559)	
BESCOM	(148)	(1)	207	(2,712)	(4,480)	
CHESCOM	(876)	(1,242)	(1,966)	(2,388)	(2,686)	
GESCOM	(1,002)	(1,995)	(3,113)	(3,101)	(3,398)	
HESCOM	(1,956)	(2,638)	(5,128)	(6,422)	(7,258)	
MESCOM	188	231	178	211	263	
Kerala	(11,239)	(12,104)	(18,970)	(24,266)	(29,335)	
KSEBL	(11,239)	(12,104)	(18,970)	(24,266)	(29,335)	
Madhya Pradesh	(51,061)	(52,981)	(56,880)	(61,010)	(64,843)	
MPMaKVVCL	(21,962)	(23,240)	(24,690)	(26,411)	(26,663)	
MPPaKVVCL	(11,421)	(10,492)	(10,187)	(11,977)	(13,107)	
MPPoKVVCL	(17,678)	(19,249)	(22,004)	(22,621)	(25,073)	
Maharashtra	(25,791)	(23,428)	(26,251)	(26,070)	(31,275)	
MSEDCL	(25,791)	(23,428)	(26,251)	(26,070)	(31,275)	
Manipur	(116)	(131)	(146)	(157)	(286)	
MSPDCL	(116)	(131)	(146)	(157)	(286)	

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Meghalaya	(1,969)	(2,413)	(2,475)	(2,636)	(4,104)
MePDCL	(1,969)	(2,413)	(2,475)	(2,636)	(4,104)
Punjab	(7,001)	(8,159)	(6,713)	(5,644)	(10,420)
PSPCL	(7,001)	(8,159)	(6,713)	(5,644)	(10,420)
Rajasthan	(89,854)	(86,868)	(89,084)	(89,556)	(92,070)
AVVNL	(29,019)	(28,230)	(28,055)	(27,497)	(28,263)
JdVVNL	(29,775)	(29,765)	(31,497)	(32,962)	(34,488)
JVVNL	(31,060)	(28,872)	(29,533)	(29,097)	(29,318)
Tamil Nadu	(87,895)	(99,860)	(1,38,643)	(1,51,639)	(1,62,507)
TANGEDCO	(87,895)	(99,860)	(1,38,643)	(1,51,639)	(1,62,507)
Telangana	(36,231)	(42,293)	(48,982)	(49,816)	(60,922)
TSNPDCL	(11,869)	(12,984)	(15,427)	(15,634)	(18,593)
TSSPDCL	(24,362)	(29,309)	(33,555)	(34,182)	(42,330)
Tripura	(333)	(391)	(382)	(514)	(804)
TSECL	(333)	(391)	(382)	(514)	(804)
Uttar Pradesh	(81,342)	(85,069)	(70,661)	(78,004)	(91,632)
DVVNL	(27,310)	(27,754)	(21,999)	(24,971)	(30,050)
KESCO	(3,569)	(3,790)	(3,961)	(4,185)	(4,187)
MVVNL	(14,858)	(15,557)	(13,447)	(15,520)	(20,345)
PaVVNL	(16,227)	(17,295)	(20,919)	(21,624)	(17,970)
PuVVNL	(19,379)	(20,674)	(10,334)	(11,703)	(19,081)
Uttarakhand	(3,122)	(3,699)	(3,851)	(3,872)	(5,096)
UPCL	(3,122)	(3,699)	(3,851)	(3,872)	(5,096)
West Bengal	(43)	3	34	83	119
WBSEDCL	(43)	3	34	83	119
Private Sector	7,389	6,424	21,008	24,963	28,769
DNH7 DD	129	140	370	476	-
DNHPDCL	129	140	370	476	-
Delhi	3,152	3,972	8,702	9,622	11,591
BRPL	729	1,040	3,760	4,144	5,244
BYPL	384	603	2,316	2,539	3,094
TPDDL	2,039	2,330	2,627	2,939	3,253
Gujarat	-	-	2,444	2,773	4,018
Torrent Surat	-	-	402	322	592
Torrent Ahmedabad	-	-	2,042	2,451	3,426
Maharashtra	9	(1,307)	(776)	898	1,580
AEML	9	(1,307)	(776)	898	1,580
Odisha	(6,308)	(7,152)	(549)	264	517
NESCO / TPNODL	(308)	(451)	(577)	74	190
SOUTHCO / TPSODL	(765)	(1,101)	22	91	124
WESCO / TPWODL	(1,321)	(1,351)	(1)	63	154
CESU / TPCODL	(3,914)	(4,249)	7	36	49
Uttar Pradesh	878	945	1,047	1,168	1,293
NPCL	878	945	1,047	1,168	1,293
West Bengal	9,528	9,825	9,770	9,761	9,770
CESC	9,365	9,620	9,541	9,500	9,491
IPCL	163	205	230	261	279
Grand Total	(4,77,016)	(5,05,361)	(5,45,418)	(5,84,071)	(6,47,913)

RAJYA SABHA UNSTARRED QUESTION NO.790 ANSWERED ON 02.12.2024

POWER DEMAND LEADING TO POWER-CUT

790 DR. ASHOK KUMAR MITTAL:

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

(a) whether it is a fact that average demand of power consumption in the country is 215 Gigawatt and supply during peak time stood at 192 Gigawatt, which causes massive power-cut in different parts of the country;

(b) if so, whether Government proposes to enhance power supply as per the increasing demand of consumption and if so, the details thereof; and

(c) the details of growth in demand and supply of power during the last five years and the proposals to meet up the demand of power consumption by 2030 thereof?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) to (c): The Country has successfully met Peak demand of 249.854 GW during May, 2024. The month-wise details of All India Peak demand, Peak met and shortage during 2023-24 and current year (till October, 2024) are given at **Annexure-I**.

The details of All India Power Supply Position in terms of Energy and Peak during the last five years i.e., 2019-20 to 2023-24 and the current year 2024-25 (upto October, 2024) are given at **Annexure-II**.

As per midterm review of 20th Electric Power Survey (EPS), the country's peak electricity demand in 2029-30 is projected to be 344.797 GW. To meet this power demand, Government has undertaken the following steps:

(i) **Generation Planning:**

- a) Installed generation capacity in 2029-30 is likely to be 777.14 GW. This includes capacity from conventional sources- Coal, Lignite etc., renewable sources- Solar, Wind, Hydro, Pump Storage project (PSP) and Battery Energy Storage System (BESS).
- b) 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.

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- c) All the States were advised to initiate process for creation of generation capacities; from all generation sources, as per their Resource Adequacy Plans.
- (d) Ministry of Power, in consultation with States, has envisaged a plan to add thermal capacity of a minimum 80,000 MW by 2031-32. Against this target, 29,200 MW Thermal Capacity is already under construction while 51,520 MW is at various stages of planning & development. In addition, 13,997.5 MW of Hydro Electric Projects and 6,050 MW Pumped Storage Projects (PSP) are under construction. 24,225.5 MW of hydro electric projects and 50,760 MW of PSP are under various stage of planning and targeted to be completed by 2031-32. Also, 7,300 MW of Nuclear Capacity is under construction and 7,000 MW is under various stages of planning and approval.
- (ii) 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.

(iii) Distribution System Planning:

- a) An expenditure of approx Rs. 1.85 lakh crore was incurred for strengthening the distribution system of the country through the schemes of Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS) and Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA). The Government of India has now launched "Revamped Distribution Sector Scheme (RDSS) on 20th 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 crore from Government of India over a period of five years from 2021-22 to FY 2025-26. Under RDSS, projects worth Rs. 2.77 lakh crore for distribution infrastructure works and smart metering works have been sanctioned at National level.
- b) Realizing the importance of the requirement of Distribution infrastructure for meeting the projected demand up to 2030, Distribution Perspective Plan upto 2029-30 has been prepared by CEA and has been shared with the States/ UTs

(iv) **Promotion of Renewable Energy Generation:**

- a) India has committed to augment non fossil fuel based installed electricity generation capacity to over 5,00,000 MW by 2031-32. Transmission plan for integration of 5,00,000 MW RE capacity is being implemented in a phased manner commensurate with RE capacity
- b) Waiver of ISTS charges on transmission of electricity generated from Solar, Wind, Pumped Storage Plants and Battery Energy Storage Systems.
- c) Renewable Purchase Obligations (RPOs) and Energy Storage obligations Trajectory till 2029-30.
- d) Construction of Green Energy Corridors and putting in place 13 Renewable Energy Management Centres.
- e) Setting up of Ultra Mega Renewable Energy Parks to provide land and transmission to RE developers for installation of RE projects at large scale.

ANNEXURE-I

ANNEXURE REFERRED IN REPLY TO PARTS (a) TO (c) OF UNSTARRED QUESTION NO. 790 ANSWERED IN THE RAJYA SABHA ON 02.12.2024 *********

The month-wise details of All India Peak demand, Peak met and shortage during 2023-24 and current year (till October, 2024):

All figures in Gigawatt (GW)					
		2023	3-24		
Month	Peak Demand	Peak Met	Surplus / I	Deficit (-)	
	GW	GW	GW	%	
April-2023	216.142	215.972	-0.170	-0.1	
May-2023	221.718	221.423	-0.295	-0.1	
June-2023	224.106	223.292	-0.814	-0.4	
July-2023	209.039	208.952	-0.087	0.0	
August-2023	238.824	236.295	-2.528	-1.1	
Septenber-2023	243.271	239.931	-3.340	-1.4	
October-2023	222.160	221.539	-0.620	-0.3	
November-2023	204.777	204.568	-0.209	-0.1	
December-2023	213.793	213.620	-0.173	-0.1	
January-2024	223.516	222.327	-1.189	-0.5	
February-2024	222.166	222.003	-0.163	-0.1	
March-2024	221.823	221.684	-0.139	-0.1	

	2024-25 (Upto October-2024)					
Month	Peak Demand	Peak Met	Surplus /	Deficit (-)		
	GW	GW	GW	%		
April-2024	224.181	224.052	-0.129	-0.1		
May-2024	249.856	249.854	-0.002	-0.001		
June-2024	244.529	244.520	-0.009	0.0		
July-2024	226.786	226.630	-0.156	-0.07		
August-2024	216.486	216.470	-0.016	-0.01		
September-2024	230.613	230.458	-0.155	-0.07		
October-2024	219.254	219.222	-0.032	-0.01		

ANNEXURE-II

ANNEXURE REFERRED IN REPLY TO PARTS (a) TO (c) OF UNSTARRED QUESTION NO. 790 ANSWERED IN THE RAJYA SABHA ON 02.12.2024 ********

All India Power Supply Position in terms of Energy (in Million Unit) and Peak (in Mega Watt) during the last five years i.e. 2019-20 to 2023-24 and the current year 2024-25 (upto October, 2024)

FY	Energy Require- ment	Energy Supplied	Energ Supp	•	Peak Demand	Peak Met	Demand	l not Met
	(MU)	(MU)	(MU)	(%)	(MW)	(MW)	(MW)	(%)
2019-20	12,91,010	12,84,444	6,566	0.5	1,83,804	1,82,533	1,271	0.7
2020-21	12,75,534	12,70,663	4,871	0.4	1,90,198	1,89,395	802	0.4
2021-22	13,79,812	13,74,024	5,787	0.4	2,03,014	2,00,539	2,475	1.2
2022-23	15,13,497	15,05,914	7,583	0.5	2,15,888	2,07,231	8,657	4.0
2023-24	16,26,132	16,22,020	4,112	0.3	2,43,271	2,39,931	3,340	1.4
2024-25 (upto October, 2024)	10,28,850	10,27,589	1,261	0.1	2,49,856	2,49,854	2	0.001

RAJYA SABHA UNSTARRED QUESTION NO.791 ANSWERED ON 02.12.2024

INITIATIVES TO HARNESS HYDRO POTENTIAL

791 DR. DHARMASTHALA VEERENDRA HEGGADE: SHRI SANT BALBIR SINGH:

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

(a) whether Government has taken any initiative to harness the hydro potential including the hydro pumped storage potential and if so, the details thereof;

(b) the exploitable large hydro potential and the identified pumped storage potential in the country, State-wise; and

(c) the number of hydro electric projects in the country whose Detailed Project Reports (DPRs) have been concurred by the Central Electricity Authority, during the last five years along with the number of DPRs under preparation, State-wise?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): The Government of India has taken various initiatives to harness the hydro-power potential including the hydro pumped storage potential viz :-

- i. Declaring large hydropower projects (capacity above 25 MW) as renewable energy source.
- ii. Hydro Renewable Energy Consumption Obligation by Designated Consumers.
- iii. Tariff rationalization measures for bringing down hydropower tariff.
- iv. Budgetary support for Flood Moderation/Storage hydroelectric projects.
- v. Budgetary support towards cost of enabling infrastructure, i.e. roads, bridges, ropeways, railway siding, communication infrastructure and Transmission Line from power house to the nearest pooling point, including upgradation of polling substations of State or Central Transmission Utility.
- vi. Guidelines to promote development of Pumped Storage Projects (PSPs) in the country was issued on 10th April, 2023.
- vii. Waiver of Inter State Transmission System (ISTS) charges for hydroelectric projects and PSPs.

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- viii. Central Financial Assistance (CFA) to the State Governments of North Eastern Region (NER) towards their equity participation for development of Hydro Electric Projects in the NER through Joint Venture collaboration between State entities and Central Public Sector Undertakings.
- ix. Reduction of timeline by Central Electricity Authority (CEA) for concurrence of Detailed Project Reports (DPR) of hydroelectric projects and PSPs.

(b): As per the study carried out by CEA during the period 2017-2023, the exploitable large hydro potential in the country is about 133.4 Giga Watt (GW). Further, the identified pumped storage potential is about 181.4 GW. The State / UT-wise details are at Annexure-I.

(c): CEA has concurred 11 Hydroelectric (H.E.) schemes including PSPs with an aggregate installed capacity of 9,048 MW during the last five years. The State/UT-wise details are at **Annexure-II**. Further, 11 H.E. Schemes aggregating to 8,036 MW and 44 PSPs aggregating to 60,050 MW are under Survey & Investigation (S&I) for preparation of Detailed Project Report. The State / UT-wise details are at **Annexure-III**.

ANNEXURE-I

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO.791 ANSWERED IN THE RAJYA SABHA ON 02.12.2024 *********

<u>State / UT-wise details of Exploitable Potential of Hydro and Identified Potential of Pumped</u> Storage (capacity above 25 MW)

<u></u>	e (capacity above 25 will)	(Figures in M
Region/State/UT	Exploitable Conventional Hydro Potential	Identified Pumped Storage Potential
Northern Region (NR)		
Jammu & Kashmir	12264	-
Ladakh	707	-
Himachal Pradesh	18305	7260
Punjab	1301	-
Haryana	-	-
Rajasthan	411	9200
Uttarakhand	13481	1000
Uttar Pradesh	502	16620
Sub Total (NR)	46971	34080
Western Region (WR)	· · · ·	
Madhya Pradesh	2819	8560
Chhattisgarh	1311	8525
Gujarat	550	7700
Maharashtra	3144	43405
Goa	-	-
Sub Total (WR)	7824	68190
Southern Region (SR)	I	
Andhra Pradesh	2596	26420
Telangana	1302	8755
Karnataka	4414	7600
Kerala	2473	1200
Tamil Nadu	1785	16500
Sub Total (SR)	12570	60475
Eastern Region		
Jharkhand	300	1500
Bihar	130	-
Odisha	2825	5075
West Bengal	809	5500
Sikkim	6051	-
Sub Total (ER)	10115	12075
North Eastern Region (NER)	10110	1-010
Meghalaya	2026	_
Tripura	-	_
Manipur	615	
Assam	643	320
Nagaland	325	-
Arunachal Pradesh	50394	660
Mizoram	1927	5550
Sub Total (NER)	55930	6530
Total (ALL INDIA)	1,33,410	1,81,350

Note: Exploitable/Identified Potential is subject to change due to addition/deletion and change in Installed capacity of some projects.

ANNEXURE REFERRED IN REPLY TO PART (c) OF UNSTARRED QUESTION NO.791 ANSWERED IN THE RAJYA SABHA ON 02.12.2024 *********

State/UT-wise number of Hydro Electric (H.E.) Schemes including Pumped Storage Projects (PSPs) concurred by CEA during last five years

Sl. No.	Name of the HE Scheme	Sector	Developer	Installed Capacity (MW)	Date of concurrence
Andh	ra Pradesh				
1	Pinnapuram (PSP)	Private	Greenko Energies Pvt. Ltd.	1200	20.04.2022
2	Upper Sileru (PSP)	State	APGENCO	1350	13.06.2023
Hima	ichal Pradesh				
3	Sunni Dam	Central	SJVNL	382	11.02.2021
4	Thana Plaun	State	HPPCL	191	07.09.2021
5	Dugar	Central	NHPC	500	26.04.2022
Jamn	nu & Kashmir				
6	Uri-I Stage-II	Central	NHPC	240	07.03.2023
Maha	rashtra				
7	Bhivpuri (PSP)	Private	TATA Power	1000	30.09.2024
8	Bhavali (PSP)	Private	JSW Energy	1500	24.09.2024
Megh	alaya				
9	Wah-Umium Stage-III	Central	NEEPCO	85	26.07.2021
Odisł	ha				
10	Upper Indravati (PSP)	State	OHPC	600	30.08.2024
Karn	ataka				
11	Sharavathy (PSP)	State	KPCL	2000	09.09.2024
	Tota			9048	

ANNEXURE REFERRED IN REPLY TO PART (c) OF UNSTARRED QUESTION NO.791 ANSWERED IN THE RAJYA SABHA ON 02.12.2024

State/UT-wise details of Hydro Electric Schemes for which Detailed Project Reports (DPRs) are under preparation

1. Hydro Electric (H.E.) Schemes

SI. No.	Name of Scheme	Installed Capacity (MW)
Jammu	&Kashmir (J&K)	
1	Dulhasti Stage-II	260
Sub To	tal (J&K)	260
Arunac	hal Pradesh	
2	Demwe Upper St-I	270
3	Niare	909
4	Naba	1082
5	Anjaw	270
6	Oju	2220
7	Subansiri Upper	1605
8	Kurung	320
Sub To	tal (Arunachal Pradesh)	6676
Megha	laya	
9	MyntduLeshka Stage-II	210
Sub To	tal (Meghalaya)	210
West B	engal	
10	Teesta Intermediate	90
Sub To	tal (West Bengal)	90
Kerala		
11	Idukki Extension Scheme	800
Sub To	tal (Kerala)	800
	Total	8,036

Sl. No.	Name of Scheme	Installed Capacity (MW)
Rajasth	an	
1	Sukhpura Off-Stream	2560
2	Shahpur	1800
3	Sirohi	1200
4	Brahmani	600
Sub To	tal (Rajasthan)	6160
Uttar P	radesh	
5	Kandhaura	1680
6	Musakhand	600
7	UP01	3660
8	Shoma	2400
9	Jhariya	1620
10	Chichlik	1560
11	Panaura	1500
Sub To	tal (Uttar Pradesh)	13020
Odisha		I
12	Balimela PSP	500
Sub To	tal (Odisha)	500
Gujarat		
13	Serula	960
14	Juni Kayaliwel	300
15	Amalpada	300
Sub Tot	al (Gujarat)	1560
Madhya	a Pradesh	
16	Indira Sagar	640
17	MP30 Gandhi Sagar	1920
Sub Tot	tal (Madhya Pradesh)	2560
Chhattis	garh	
18	Hasdeo Bango	800
19	Bilaspur	1000
Sub Tot	al (Chhattisgarh)	1800

2. Pumped Storage Projects (PSPs)

Mahara	ashtra	
20	Pane	1500
21	Tarali	1500
22	Malshej Ghat Bhorande	1500
23	Shirwata	1800
24	Warasgaon Warangi	1500
25	Koyna Nivakane	2700
26	Nayagaon	2000
27	Karjat (Saidongar-1)	3000
28	Maval (Saidongar-2)	1200
Sub To	tal (Maharashtra)	16700
Andhra	n Pradesh	
29	Gandikota	1000
30	Chitravathi	500
31	Somasila	900
32	Owk	800
33	Paidipalem East	1200
34	Singanamala	800
35	Paidipalem North	1000
36	Veeraballi Off-Stream	1800
37	Vempalli	1500
38	Raiwada	900
39	Kamalapadu	950
40	Rayavaram	1500
41	Gadikota	1200
42	Pedakota	1800
Sub To	tal (Andhra Pradesh)	15850
Karnat	aka	
43	Saundatti	1600
44	Narihalla	300
Sub To	tal (Karnataka)	1900
	Total	60050

RAJYA SABHA UNSTARRED QUESTION NO.792 ANSWERED ON 02.12.2024

PROPOSAL TO AUGMENT POWER GENERATION CAPACITY

792 SHRI HARBHAJAN SINGH:

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

(a) whether Government is aware that with rising temperature every year during summer, power demand is touching new heights year after year;

(b) if so, whether there is any proposal to augment power generation capacity, particularly in new and renewable sources to fulfil the demand, and the details thereof; and

(c) the details of the steps taken by the Ministry to improve and augment power production in the State of Punjab?

ANSWER

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): The country has experienced a highest ever Peak Demand of 2,49,854 MW in May, 2024 which was met successfully. There has been consistent growth in Peak Demand and Energy Requirement of the country due to rapid economic growth in recent years, providing new electricity connections to households and increased hours of supply in Urban and Rural areas. The details of Power Supply Position in the country for the last three years and the current year till October, 2024 are given at Annexure.

(b): There is adequate availability of power in the country. Present installed generation capacity of the country is 4,54,452 MW. Government of India has addressed the critical issue of power deficiency by adding 2,22,500 MW of generation capacity since April, 2014 transforming our country from power deficit to power sufficient.

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

(i) Ministry of Power, in consultation with States, has envisaged a plan to add thermal capacity of a minimum 80,000 MW by 2031-32. Against this target, 29,200 MW Thermal Capacity is already under construction while 51,520 MW is at various stages of planning & development.

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(ii) 13,997.5 MW of Hydro Electric Projects and 6,050 MW Pumped Storage Projects (PSP) are under construction. 24,225.5 MW of hydro electric projects and 50,760 MW of PSP are under various stage of planning and targeted to be completed by 2031-32.

- 2 -

(iii) 7,300 MW of Nuclear Capacity is under construction and 7,000 MW is under various stages of planning and approval.

(iv) Present installed Renewable Energy (RE) capacity of the country is 2,03,215 MW. Further, 1,27,050 MW of RE is under construction and 89,690 MW is under various stages of tendering. India has committed to augment non fossil fuel based installed electricity generation capacity to over 5,00,000 MW by 2030.

(c): Electricity, being a concurrent subject, supply and distribution of electricity to the consumers in a State/ UT is within the purview of respective State Government/Power Utility. Making arrangement of appropriate quantum of power from various sources to meet the demand of various types of electricity consumers in any State/ UT is in the jurisdiction of concerned State Government and the State Electricity Regulatory Commission. The Central Government supplements the efforts of the State Governments by establishing power plants in Central Sector through Central Public Sector Undertaking (CPSUs) and allocating power from them to the various States/ UTs, as per their entitlement.

Keeping in view the power supply position of Punjab and the request of the State Government for meeting the increased power demand during paddy seasons, Ministry of Power had allocated additional power from the Central Generating Stations (CGSs) for the FY 2024-25 as per the following details:

- (i) 207 MW for the period June, 2024 to September, 2024 from Unallocated pool of Northern Region.
- (ii) 180 MW from 01.06.2024 to 15.10.2024 from Telangana STPP Unallocated power and 300 MW from 01.07.2024 to 15.10.2024 from NR Pool.
- (iii) 200 MW from 16.07.2024 to 15.09.2024 from Unallocated pool of Southern Region.

ANNEXURE REFERRED IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 792 ANSWERED IN THE RAJYA SABHA ON 02.12.2024 ********

The details of actual Power Supply Position in the country for the last three years and the current year till October, 2024

	Energy [in Million Units (MU)]					
Year	Energy Requirement	Energy Supplied	Energy not Supplied			
	(MU)	(MU)	(MU)	(%)		
2021-22	13,79,812	13,74,024	5,787	0.4		
2022-23	15,13,497	15,05,914	7,583	0.5		
2023-24	16,26,132	16,22,020	4,112	0.3		
2024-25 (upto October, 2024)*	10,28,850	10,27,589	1,261	0.1		

*Figures for October, 2024 are provisional

	Peak [in Mega Watt (MW)]			
Year	Peak Demand	Peak Met	Demand not Met	
	(MW)	(MW)	(MW)	(%)
2021-22	2,03,014	2,00,539	2,475	1.2
2022-23	2,15,888	2,07,231	8,657	4.0
2023-24	2,43,271	2,39,931	3,340	1.4
2024-25 (Upto October, 2024)	2,49,856	2,49,854	2	0.001

RAJYA SABHA UNSTARRED QUESTION NO.793 ANSWERED ON 02.12.2024

STREET LIGHTING NATIONAL PROGRAMME IN BIHAR AND TAMIL NADU

793 SHRI C. VE. SHANMUGAM: DR. BHIM SINGH:

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

(a) the details and salient features of Street Lighting National Programme (SLNP);

(b) whether Government has any proposal to replace conventional street lights with LED lights in the States of Bihar and Tamil Nadu under SLNP;

(c) if so, the details thereof along with work done so far in this regard; and

(d) the quantum of funds allocated and utilised under SLNP for the States of Bihar and Tamil Nadu during the last three years and the current year?

ANSWER

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): Street Lighting National Programme (SLNP) launched in 2015, aims to reduce energy consumption and costs in public lighting through widespread adoption of LED lamps for street lighting across India.

Energy Efficiency Services Limited (EESL), a joint venture of CPSEs under the Ministry of Power is the implementing agency for SLNP. Under this programme, EESL adopted the business model that relieves Local Bodies from upfront investment burden. EESL makes the upfront investment and recoups it through monthly/quarterly annuities paid by the Local Bodies during the project duration. Under SLNP, EESL also handles the maintenance of LED street lights, ensuring over 95% uptime, which enhances public safety and reliable municipal services without burdening Local Body budgets.

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More than 13.1 million LED streetlights have been installed across different urban and rural areas under SLNP. This has resulted in an annual electricity saving of approximately 8.8 billion kWh and annual monetary savings of around ₹6,178 crore for municipalities and gram panchayats. The State-wise details of LED streetlights installed is at **Annexure**.

(b) & (c): SLNP programme has already been implemented in Bihar. As on 20th November 2024, 5,75,922 streetlights has been replaced with LED streetlights under SLNP in Bihar. The SLNP programme has not yet been implemented in Tamil Nadu. This is because SLNP is a voluntary programme wherein EESL enters into agreements with Local Bodies/ State/UT Government who express their consent and willingness to implement the programme in their jurisdiction. As EESL has not received any consent from Tamil Nadu to implement SLNP, the programme has not yet been implemented.

(d): Government of India has not allocated any budget for SLNP, as the programme is implemented by EESL in self-financing mode.

ANNEXURE

ANNEXURE REFERRED IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 793 ANSWERED IN THE RAJYA SABHA ON 02.12.2024 ****

Sr. No.	State	LED Street Light	
1	ANDHRA PRADESH	29,47,706	
2	ASSAM	28,875	
3	BIHAR	5,75,922	
4	CHANDIGARH	46,496	
5	CHHATTISGARH	3,81,199	
6	DELHI	17,28,884	
7	GOA	2,07,183	
8	GUJARAT	9,03,519	
9	HARYANA	85,139	
10	HIMACHAL PRADESH	63,332	
11	JAMMU & KASHMIR	1,88,860	
12	JHARKHAND	5,54,091	
13	KARNATAKA	13,226	
14	KERALA	4,33,979	
15	LAKSHADWEEP	1000	
16	MADHYA PRADESH	2,95,417	
17	MAHARASHTRA	11,14,328	
18	ODISHA	3,53,808	
19	Pondicherry	1,520	
20	PORTBLAIR	14,995	
21	PUNJAB	1,27,267	
22	RAJASTHAN	10,73,238	
23	SIKKIM	1,073	
24	TAMILNADU	7,876 (under institutional project)	
25	TELANGANA	17,28,884	
26	TRIPURA	76,426	
27	UTTAR PRADESH	12,90,949	
28	UTTARAKHAND	1,33,511	
29	WEST BENGAL	94,198	
	GRAND TOTAL	1,31,42,082	

RAJYA SABHA UNSTARRED QUESTION NO.794 ANSWERED ON 02.12.2024

RELIABLE POWER SUPPLY TO FARMERS

794 DR. PARMAR JASHVANTSINH SALAMSINH: SHRI MADAN RATHORE:

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

(a) whether Government has made efforts to separate agricultural feeders where the load is higher so as to reduce the load for domestic consumption;

(b) the total number of feeders identified and separated so far; and

(c) the total cost involved in separation of feeders?

ANSWER

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) to (c): Government of India has been laying emphasis on segregation of mixed load feeders having more than 30% agricultural load into agriculture and non-agricultural feeders with the objective of efficient load management. It is expected that separation of agriculture feeders would facilitate judicious rostering of supply for agricultural consumption and enable their solarisation which would help in reducing the cost of supply. It will also help in providing reliable and quality supply to non-agricultural consumers in the rural areas.

Under the scheme of Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), launched in 2014 and Revamped Distribution Sector Scheme (RDSS), launched in 2021 works have been sanctioned for feeder segregation works. Under DDUGJY, 7,833 feeders were segregated with a project cost of Rs. 10,394 Cr and the scheme stands closed as on 31.03.2022.

Under RDSS, feeder segregation works amounting to Rs. 40,509 Cr have been sanctioned and the works are to be completed within the scheme period i.e. 31.03.2026.

#	Particulars	Feeders
1	Total feeders with more than 30% agricultural load feasible for segregation	80,631
2	Feeders already segregated under various schemes	49,512
3	Feeders sanctioned under RDSS	31,119
4.	Feeders segregated under RDSS till date	3,874

The status of feeder segregation works is as below: