

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
STARRED QUESTION NO.25
ANSWERED ON 05.12.2023

SUPPLY OF ELECTRICITY IN TRIBAL DOMINATED RURAL AREAS

25 DR. KIRODI LAL MEENA:

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

- (a) the details of efforts being made by Government to meet the demand of electricity in tribal dominated rural areas;
- (b) the details of various projects being run by Government to ensure supply of electricity in rural areas of Rajasthan during the last three years;
- (c) the details of efforts being made by Government to ensure the supply of electricity in remote and hilly areas;
- (d) whether any new project is under consideration to provide electricity in Dausa and Banswara Parliamentary Constituency; and
- (e) if so, the details thereof?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

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

STATEMENT

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (e) IN RESPECT OF RAJYA SABHA STARRED QUESTION NO.25 FOR REPLY ON 05.12.2023 REGARDING SUPPLY OF ELECTRICITY IN TRIBAL DOMINATED RURAL AREAS ASKED BY DR. KIRODI LAL MEENA.

(a) to (c): Government of India has always supplemented the efforts of the States through its various schemes, like Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS), Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) etc., to help them achieve the objective of providing uninterrupted power supply to all households. Overall ~Rs. 1.85 lakh crore was spent under the above schemes for strengthening the distribution system of the country.

Under DDUGJY, launched in December, 2014, rural electrification works across the country were carried out. As reported by the States, all the inhabited un-electrified census villages in the country were electrified by 28th April, 2018. A total of 18,374 villages were electrified under the scheme, including 427 villages of Rajasthan State. Under DDUGJY and thereafter under SAUBHAGYA, the electrification of all villages and all willing Households was completed by 31st March, 2019 as reported by all State Governments. A total of 2.86 crore households were electrified under the aegis of SAUBHAGYA, including 20,75,522 households of Rajasthan State upto 31.03.2022. As reported by the States, all the willing un-electrified households, identified before March, 2019 were electrified, including those in tribal, remote and hilly areas.

Recently, Government of India has launched Revamped Distribution Sector Scheme (RDSS) 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. RDSS has a universal coverage and is mainly focused on strengthening of sub-transmission and distribution network of project areas for the benefit of consumers including tribal, remote and hilly areas. The Central Government in line with its commitment, is further supporting States for electrification of these households which were missed out under SAUBHAGYA, under the ongoing scheme of Revamped Distribution Sector Scheme (RDSS). In addition, all identified beneficiary Households under PM-JANMAN (Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan) for PVTG Development Mission for on-grid electricity connection shall be eligible for funding under RDSS as per the scheme guidelines.

Under RDSS, total projects amounting to Rs. 18,627 Crs have been sanctioned across Discoms of Rajasthan.

(Amount in Rs. Cr)

Sl. No	Name of the Project in Rajasthan	Approved Project Cost	GoI Grant Sanctioned
1	Smart Metering Works	9,715	1,686
2	Infrastructure Works	8,912	5,348
	Total	18,627	7,034

In addition, projects amounting to Rs 459.19 Crs have been sanctioned for electrification of left out 1.9 lakh households.

(d) & (e): Under RDSS, distribution infrastructure works amounting to Rs. 235.37 Crs has been sanctioned in Banswara parliamentary constituency and Rs. 297.67 Crs has been sanctioned in Dausa parliamentary constituency. Details are as under:

SI No.	Items	Units	Dausa Parliamentary Constituency	Banswara Parliamentary Constituency
1	Cabling works	Ckm	951.68	1489
2	HVDS			
2a	11kV	Ckm	492.46	609.96
2b	New DTR	Nos	1,394	180
3	Feeder Bifurcation	Ckm	994.42	666.48
4	Feeder Segregation	Ckm	1,714.03	3047.03
5	Replacement of old/ frayed conductors	Ckm	-	375.56
6	New Power substation	Nos.	12	3
7	Augmentation of Power Substation	Nos.	-	2
8	New 33 kV Line	Ckm	73.82	26
9	New 11kV Line	Ckm	101.97	-
10	EV Charging Station	Nos.	6	2
11	Armored Cable for new consumers	kms	794.47	1197
12	Capacitor Banks	Nos.	44,323	-

Details of household electrification works sanctioned under RDSS are as under:

SI No	Particulars	Units	Dausa Parliamentary Constituency	Banswara Parliamentary Constituency
1	Sanctioned Project Cost	Rs. Cr.	-	32.36
2	No. of HHs	Nos.	-	19,179

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.199
ANSWERED ON 05.12.2023

OVERPRICING OF COAL IMPORTS BY ADANIS

199 SHRI JAWHAR SIRCAR:

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

- (a) whether Government has examined the report published by Financial Times on 12th of October, 2023 regarding the overcharging of coal imports by Adanis, directly or through associates or by other means;
- (b) whether Government has compared the relevant costs of imported coal with prevailing international costs of comparable grades of coal;
- (c) whether Government has found the additional outgo of foreign exchange due to over-invoicing;
- (d) how much power plants who were compelled to mix this overcharged imported coal lost; and
- (e) the action is being done for this deliberate loss of foreign exchange and the overcharging of electricity bills by customers?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) to (e) : The concern of Ministry of Power is to ensure sufficient availability of coal at TPPs so that the demand of electricity may be met. Coal, whether domestic or imported, is procured by Thermal Power Plants (DCBs or ICBs) separately and as per their requirements. As Coal is under open general licence (OGL) since 1993, thermal power plants/generators have been regularly importing coal as per their preference (imported coal has high GCV value and therefore is of better quality) and need based on their commercial prudence. There are a number of Power Plants based exclusively on imported coal. In addition, the Domestic Coal Based (DCBs) plants have been importing coal for blending purpose since 2009. The imports for blending varied between a peak of 47.6 MT in 2015-16 to 23.8 MT in 2019-20. In 2020, Ministry of Power advised States to reduce imports for blending, as a result the imports declined to 8.1 MT in the year 2021-22. Information regarding coal imports by DCBs and ICBs is regularly collected and monitored by CEA.

2. The import of coal by the thermal Power Plant during last 14 years and in the current year (up to Oct 2023) is as follows:

Import of coal by power sector			
Fig in Million Tonnes			
Year	Import for Blending	Import by Imported coal based plants	Total Import
2009-10	18.8	4.4	23.2
2010-11	21.1	9.4	30.5
2011-12	27.3	17.6	44.9
2012-13	31.1	31.6	62.7
2013-14	38.6	40.9	79.5
2014-15	47.6	42.5	90.1
2015-16	37.1	44.0	81.1
2016-17	19.8	46.3	66.1
2017-18	17.0	39.4	56.4
2018-19	21.4	40.3	61.7
2019-20	23.8	45.5	69.3
2020-21	10.4	35.1	45.5
2021-22	8.1	18.9	27.0
2022-23	35.1	20.5	55.6
2023-24 (Apr-Oct)	13.6	21.7	35.3

The above table clearly shows that Import of coal, for DCBs, was on decline since 2019-20 primarily due to increased availability of domestic coal on account of various policy measures taken to increase domestic coal production. Accordingly, the Ministry of Power, in FY 2020-21, gave advisory to GENCOs to reduce their imports as Ministry of Coal informed that sufficient domestic coal was available. However, from July'21 onwards the consumption of coal in Thermal Power Plants increased because of increased demand and the supply of domestic coal on a daily basis was less than consumption which resulted in depletion of coal stock and stocks at Plants end came down from 28.7 Million Tonnes (MT) as on 30.06.2021 to about 8.1 Million Tonnes (MT) as on 30.09.2021. Therefore, in December 2021, Ministry of Power advised State GENCOs and IPPs to import @4% and Central GENCOs @10% of their requirements during 2022-23. During the month of April, 2022, the Power Demand and the coal consumption in power plants grew by about 12% as compared to April' 2021. In view of the high demand for power and receipt of coal being less than consumption leading to depletion of coal stock, Ministry of Power on 28.04.2022 advised States and IPPs to import coal @ 10% of their requirement in order to maintain sufficient coal stock during the monsoon season. The gap between receipt of domestic coal and consumption continued and shortages partially met through Imported Coal.

3. During April-Sep' 2022 (Q1, Q2 of FY 2022-23) the receipt of domestic coal was about 355 MT against the consumption of 385 MT (Dom: 359 MT +Imp: 1.4 x 18.9 MT). **The gap between supply of domestic coal and consumption of coal was about 1.6 lakh tonnes/ day during this period.** On the improvement of the situation, Ministry of Power advised GENCOs on 01.08.2022 to take decision regarding blending at their level taking into account the domestic coal supply and stock position (need based blending) with continuous monitoring of stock levels.

The gap between daily coal consumption and daily arrival of domestic coal ranged between 2.65 Lakh Tonnes to 0.5 Lakh Tonnes between the months of September'2022 and January'2023. **If the imports for blending had not been made, the coal stocks in thermal power plants would have reduced to ZERO in September'2022 and would have continued so, leading to widespread power cuts and blackouts.** Therefore, Ministry of Power advised Central, State Gencos and Independent Power Producers (IPPs) on 09.01.2023 to import coal @ 6% by weight through a transparent competitive procurement for blending so as to have sufficient coal stocks at their power plants for smooth operations till September' 2023.

4. In the current Financial Year, Power Supply position has been regularly reviewed by the Ministry of Power and it has been observed that there is consistent rising trend in the power demand in the country coupled with inadequate supply of domestic coal which has resulted in rapid depletion of coal stocks at Domestic Coal Based (DCB) Plants across the country. **During April-October'23, the average growth in coal based generation, with respect to corresponding period of FY 23, was 8.6% and the depletion in DCB plants stocks was 15.3 MT (Month wise position is shown in table):**

Summary of, Growth in Coal Based Generation, Receipt of Domestic Coal and Consumption in DCB Plants during 2023-24 (up to Oct' 2023) is as under:

Summary of Growth in Coal based generation, receipt of Domestic Coal and consumption in DCB Plants							
Month	% Growth coal based generation w.r.t FY23	Receipt of domestic coal (MT)	Consumption of Domestic Coal (MT)	Consumption of Imported coal for blending (MT)	Total Consumption (Dom + 1.4 x Imp) (MT)	Gap (Receipt – Consumption) (MT)	Total Stock at DCB plant Level (MT)
Apr-23	0%	65.4	66.4	2.2	69.5	-4.1	34.6
May-23	2%	67.5	66.3	2.2	69.4	-1.9	33.8
Jun-23	3%	63.9	64.7	2.2	67.7	-3.9	35.0
Jul-23	8%	63.0	63.2	1.6	65.4	-2.4	33.6
Aug-23	14%	61.8	66.1	2.0	68.9	-7.1	33.1
Sep-23	12%	59.9	65.5	1.9	68.1	-8.3	28.2
Oct-23	25%	65.5	68.8	2.3	72.0	-6.5	21.8
2023-24 (Till Oct 2023)	8.6%	447.0	460.9	14.4	481.1	-34.2	19.3

On Per-day basis

Summary Growth in coal based generation, receipt of domestic coal and consumption in DCB Plants						
Month	% Growth in coal-based generation w.r.t FY23	Receipt of domestic coal (MT/day)	Consumption of Domestic Coal (MT/day)	Consumption of Imported coal for blending (MT/day)	Total Consumption (Dom + 1.4 x Imp) (MT/day)	Gap (Receipt - Consumption) (MT/day)
Apr-23	0%	2.18	2.21	0.07	2.32	-0.14
May-23	2%	2.18	2.14	0.07	2.24	-0.06
Jun-23	3%	2.13	2.16	0.07	2.26	-0.13
Jul-23	8%	2.03	2.04	0.05	2.11	-0.08
Aug-23	14%	1.99	2.13	0.06	2.22	-0.23
Sep-23	12%	2.00	2.18	0.06	2.27	-0.28
Oct-23	25%	2.11	2.22	0.07	2.32	-0.21
	8.6%					

5. About 14% fall of Hydro Generation has been recorded in H1 of FY24 compared to the corresponding period of FY23 due to variable monsoon rainfall. Approximately 2 GW of hydro capacity is out because of recent floods in Sikkim. The Reservoir levels in Northern, Eastern and Southern regions are less compared to the previous year as on 09th Oct' 2023, which has resulted in lower reservoir energy content at pan India level. This has put additional burden on Coal Based Thermal Generation.

Therefore, in order to ensure un-interrupted power supply across the country, after careful consideration, Ministry of Power vide letter dated 25.10.2023 directed all GENCOs (Central, State and IPPs) to continue import coal for blending at 6% (by weight) minimum for the rest period of FY 2023-24 till March'2024.

6. The price of the imported coal is not comparable with the price of domestic coal due to difference in calorific value. The pricing of imported coal is linked with international indices for import coal, source of origin, other factors like ocean freight, insurance etc which is purely dynamic and vary with international demand supply scenario. Every generating company imports coal as per its requirements. Further, the cost of generation of electricity is dependent upon the quantity of imported coal used and the price of imported coal.

7. DISCOMS procure power from generators on tariff fixed by the SERCs/CERC under section 62 of the Electricity Act. The Regulator fixes the tariff after examining all input costs – fuel / transport / O&M costs / administrative costs etc according to norms. If any cost which is claimed by the generator is found to be excessive by the SERCs/CERC they do not allow it to be passed through in tariff. Therefore, if any generator inflates the fuel cost, the Regulator – SERCs/CERC – will not pass it in tariff. The Regulator also lays down norms for various costs – and do not allow costs in excess of the norms to be passed through. The issue of the fuel costs and the resultant tariff is between the GENCO and the Regulator – the Government has no role to play. If a DISCOM or GENCO is aggrieved by the order of a Regulator, they can appeal to the APTEL – Appellate Tribunal.

8. The other methodology for procurement of power by DISCOMs from GENCOs is under Section 63 – by an open competitive bid. The Regulator will adopt the tariff if the bid has been competitive and transparent. The DISCOMs can sign the Power Purchase Agreement only after the tariff has been concurred in and adopted by the Regulator.

9. The third option for the Generator is sale through the exchange – which functions on the basis of open competition. In case of open competition input costs are irrelevant – if some generator's power cost is high it will not sell.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.300
ANSWERED ON 05.12.2023

FUNDS FOR BATTERY ENERGY STORAGE SYSTEM

300 SHRI VAIKO:
SHRI M. SHANMUGAM:

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

- (a) whether Government recently approved Viability Gap Funding scheme for developing Battery Energy Storage System (BESS);
- (b) if so, the details thereof;
- (c) whether it would reduce carbon emissions and dependence on fossil fuel, and if so, to what extent; and
- (d) the quantity of surplus energy from BESS expected to be given to Discoms during peak hour demand in the next five years, State-wise, details thereof?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) & (b) : Yes, Sir. Cabinet in its meeting held on 06.09.2023 approved the scheme for Viability Gap Funding (VGF) for development of Battery Energy Storage Systems (BESS) with capacity of 4,000 MWh. Under the scheme, projects will be approved during a period of 3 years (2023-24 to 2025-26). The disbursement of funds will extend upto 2030-31 in 5 tranches. The cost of BESS system is anticipated to be in the range of ₹2.40 to ₹2.20 Crore/MWh during the period 2023-26 for development of BESS capacity of 4,000 MWh, which translates into Capital Cost of ₹9,400 Crores with a Budget support of ₹3,760 Crores.

VGF to the extent of upto 40% of capital cost for BESS shall be provided by the Central Government. Public and private sector entities for development of BESS shall be selected through the bidding process to be conducted by the Implementing Agency(ies) as per the provisions of the Scheme and Bidding Guidelines.

(c) & (d) : The implementation of a 4,000 MWh is expected to result in an annual reduction of approximately 1.3 million metric tons (MMT) of carbon emissions (CO₂) considering charging of BESS with Renewable Energy (RE).

Up to 4,000 MWh of energy will be available during peak hours for Discoms and other beneficiaries to utilize, depending on their specific usage patterns.

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.313
ANSWERED ON 05.12.2023

ELECTRIFICATION OF HOUSEHOLDS

313 SHRI DEREK O' BRIEN:

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

- (a) the number and percentage of un-electrified households in rural areas;
- (b) the number and percentage of economically poor un-electrified households in urban areas;
- (c) the number of households electrified under the Saubhagya scheme in the last five years, state-wise; and
- (d) the steps taken and timeframe to achieve 100 per cent electrification of all un-electrified households in the country?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) to (d): Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya) was launched by Government of India in October, 2017 with the objective to achieve universal household electrification throughout the country. Under this scheme, electricity connection was provided to all willing un-electrified households in rural areas and all willing poor un-electrified households in urban areas. The electrification was carried out by State DISCOMs/Power Departments with funds provided by the Central Government under the Scheme. After electrification, the State DISCOMs/Power Departments were asked to certify that all willing unelectrified households were electrified. As on 31.03.2021 all States certified that they have electrified all willing unelectrified households. As per the report received from the States, 2.82 crore households were electrified throughout the country upto 31.03.2021. An additional, 4.43 lakh households were electrified through another scheme of Government of India named Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY).As such, a total of 2.86 crore households were covered under the initiative of Government of India upto 31.03.2022. The state wise details of number of household covered are enclosed at **Annexure**. Both the above mentioned schemes SAUBHAGYA and DDUGJY have been closed on 31.03.2022. The construction of new households is a dynamic and continuous process, the DISCOMs are required to ensure that those seeking connection are connected.

The Central Government in line with its commitment, is further supporting States for electrification of any left-out households, which existed before 31.03.2019 (period of execution of SAUBHAGYA) but were somehow missed out by the DISCOMs, under the ongoing scheme of Revamped Distribution Sector Scheme (RDSS). Till date, the approval has been accorded for around 4.96 Lakh left-out households for electrification for the State of Rajasthan, Uttar Pradesh and Andhra Pradesh. The details in this regard are as given below:

State	No. of HHs Proposed	Approved Cost (Rs. in Cr.)
Rajasthan	1,90,959	459.18
Uttar Pradesh	2,99,546	338.46
Andhra Pradesh	5,577	16.00

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (d) OF UNSTARRED QUESTION NO. 313 ANSWERED IN THE RAJYA SABHA ON 05.12.2023

State-wise electrification of households since launch of Saubhagya Scheme including Additional Households achievement under DDUGJY

Sl. No.	Name of the States	No of Households electrified from 11.10.2017 to 31.03.2019 as per Saubhagya Portal	Additional Sanction allowed under Saubhagya		Further Additional Households sanctioned under DDUGJY		Grand Total (A+B)
			No of Households reported electrified from 01.04.2019 to 31.03.2021	Total HHs electrified as on 31.03.2021(A)	Households Sanctioned during 2021-22	Households electrified (as on 31.03.2022) (B)	
1	Andhra Pradesh*	1,81,930	0	1,81,930			1,81,930
2	Arunachal Pradesh	47,089	0	47,089	7859	0	47,089
3	Assam	17,45,149	2,00,000	19,45,149	480249	381507#	23,26,656
4	Bihar	32,59,041	0	32,59,041			32,59,041
5	Chhattisgarh	7,49,397	40,394	7,89,791	21981	2577	7,92,368
6	Gujarat*	41,317	0	41,317			41,317
7	Haryana	54,681	0	54,681			54,681
8	Himachal Pradesh	12,891	0	12,891			12,891
9	Jammu & Kashmir	3,77,045	0	3,77,045			3,77,045
10	Jharkhand	15,30,708	2,00,000	17,30,708			17,30,708
11	Karnataka	3,56,974	26,824	3,83,798			3,83,798
12	Ladakh	10,456	0	10,456			10,456
13	Madhya Pradesh	19,84,264	0	19,84,264	99722	0	19,84,264
14	Maharashtra	15,17,922	0	15,17,922			15,17,922
15	Manipur	1,02,748	5,367	1,08,115	21135	0	1,08,115
16	Meghalaya	1,99,839	0	1,99,839	420	401	2,00,240
17	Mizoram	27,970	0	27,970			27,970
18	Nagaland	1,32,507	0	1,32,507	7009	7009	1,39,516
19	Odisha	24,52,444	0	24,52,444			24,52,444
20	Puducherry*	912	0	912			912
21	Punjab	3,477	0	3,477			3,477
22	Rajasthan	18,62,736	2,12,786	20,75,522	210843	52206	21,27,728
23	Sikkim	14,900	0	14,900			14,900
24	Tamil Nadu*	2,170	0	2,170			2,170
25	Telangana	5,15,084	0	5,15,084			5,15,084
26	Tripura	1,39,090	0	1,39,090			1,39,090
27	Uttar Pradesh	79,80,568	12,00,003	91,80,571	334652	0	91,80,571
28	Uttarakhand	2,48,751	0	2,48,751			2,48,751
29	West Bengal	7,32,290	0	7,32,290			7,32,290
	Total	2,62,84,350	18,85,374	2,81,69,724	11,83,870	4,43,700	2,86,13,424

#as per initial closure submitted by APDCL 381507 households have been electrified and as per the revised closure 368610 households have been electrified. However, the final closure of DDUGJY addl. HHS of Assam state is yet to be approved

*Not funded under Saubhagya

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.314
ANSWERED ON 05.12.2023

ELECTRICITY GENERATION IN MADHYA PRADESH

314 # SMT. SUMITRA BALMIK:

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

- (a) the quantum of electricity currently being generated in Madhya Pradesh, the details thereof, source-wise;
- (b) the major power plants of the Ministry in Madhya Pradesh and the quantum of electricity being generated by them, the details thereof; and
- (c) the number of sanctioned posts of non-official part-time Directors in NTPC plants of Madhya Pradesh, as per the rules and the number of posts filled and lying vacant, the details thereof?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

- (a): The source-wise details of electricity generated in Madhya Pradesh during the last two years and the current year (upto October, 2023) are given at **Annexure-I**.
- (b): The details of major power plants in Madhya Pradesh and the quantum of electricity being generated during last two years and current year (upto October, 2023) are given at **Annexure-II**.
- (c): The non-official part time directors are appointed in NTPC at the company level and not at the plant level.

ANNEXURE-I**ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 314 ANSWERED IN THE RAJYA SABHA ON 05.12.2023**

The details of quantum of electricity generated in Madhya Pradesh during the last 2 years and current year (upto October, 2023)

CATEGORY	Fuel	Generation (MU)		
		2021-22	2022-23	2023-24 (upto October, 2023)
THERMAL	COAL	129634.5	135838.5	84449.31
LARGE HYDRO	HYDRO	4686.72	7309.07	4505.03
RENEWABLE	Wind	4346.66	4486.72	3465.19
	Solar	4006.70	3839.30	2094.33
	Biomass	25.35	38.76	50.52
	Bagasse	82.20	113.05	9.94
	Small Hydro	221.43	357.97	273.43
	Others	34.40	36.93	14.58
TOTAL		143037.9	152020.3	94862.328

ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 314 ANSWERED IN THE RAJYA SABHA ON 05.12.2023

The details of major power plants in Madhya Pradesh and the quantum of electricity being generated during last 2 years and current year (upto October, 2023)

SECTOR	Name of Utility	NAME OF THE STATION	Fuel	Monitored Capacity as on 31.10.2023 MW	2021-22 (MU)	2022-23 (MU)	2023-24 (upto October 23) MU
CENTRAL SECTOR	JHAPL	SEIONI TPP	COAL	600	3708.01	3727.99	2075.53
	NHDC	INDIRA SAGAR HPS	HYDRO	1000	1717.17	3661.11	2242.47
		OMKARESHWAR HPS	HYDRO	520	928.24	1782.38	1117.94
	NTPC Ltd.	GADARWARA TPP	COAL	1600	7965.67	9390.94	5536.36
		KHARGONE STPP	COAL	1320	6343.97	5630.45	4223.72
		VINDHYACHAL STPS	COAL	4760	35730.28	37337.16	21472.06
PVT SECTOR	BLAPPL	NIWARI TPP	COAL	90	167.99	318.71	316.27
	ESSARPMPL	MAHAN TPP	COAL	1200	3431.14	3782.92	3787.08
	JPPVL	BINA TPS	COAL	500	2508.67	2979.74	1847.81
		NIGRI TPP	COAL	1320	8381.9	8036.35	5675.02
	MBPMPL	ANUPPUR TPP	COAL	1250	7715.95	7518.22	5298.84
	SPL	SASAN UMTTP	COAL	3960	32673.14	29763.91	18396.93
STATE SECTOR	MPPGCL	AMARKANTA K EXT TPS	COAL	210	1507.83	1433.97	1046
		BANSAGAR TONS-I HPS	HYDRO	315	1121.45	638.45	437.26
		BANSAGAR-II HPS	HYDRO	30	85.43	75.38	52.3
		BANSAGAR-III HPS	HYDRO	60	49.86	137.6	147
		BARGI HPS	HYDRO	90	382.35	429.84	313.66
		GANDHI SAGAR HPS	HYDRO	115	211.68	288.9	106.52
		MADHIKHERA HPS	HYDRO	60	116.5	169.8	33.75
		RAJGHAT HPS	HYDRO	45	74.04	125.61	54.13
		SANJAY GANDHI TPS	COAL	1340	6631.59	8782.77	4646.39
		SATPURA TPS	COAL	1330	3449.85	3968.04	2143.02
		SHREE SINGAJI TPP	COAL	2520	9418.46	13167.3	7984.28
Sub-Total				24235	134321.17	143147.54	88954.34
RENEWABLE			Wind	-	4346.66	4486.72	3465.19
			Solar	-	4006.70	3839.30	2094.33
			Biomass	-	25.35	38.76	50.52
			Bagasse	-	82.20	113.05	9.94
			Small Hydro	-	221.43	357.97	273.43
			Others	-	34.40	36.93	14.58
GRAND TOTAL				24235	143037.90	152020.26	94862.33

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.315
ANSWERED ON 05.12.2023

RAMPANT POWER CUT IN TAMIL NADU

315 SHRI P. WILSON:

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

- (a) whether the Ministry has taken cognisance of the shortage of crucial materials such as fuse wires, transformers, underground cables and meters faced by Tamil Nadu causing power cuts and the steps taken to deal with the problem;
- (b) the schemes put in place by the Ministry to ensure that the monsoon season in the southern regions that often results in floods does not result in rampant power cuts and power fluctuations in south India including Tamil Nadu; and
- (c) the details thereof?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) : As per Electricity Act 2003, distribution of electricity is a licensed activity and it is the duty of the respective distribution licensee to develop and maintain an efficient, co-ordinated and economical distribution system in order to provide quality and reliable power supply in their area of operation. Government have been informed that sufficient stock of fuse wires, transformers, underground cables (UG) and meters are available in TANGEDCO – the distribution utility of Tamil Nadu.

(b) & (c) : Government of India has facilitated the upgradation and creation of distribution infrastructure in DISCOMs through allocation of funds under various schemes such as Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) and Integrated Power Development Scheme (IPDS).

Recently, Government of India have launched the Revamped Distribution Sector Scheme (RDSS) with the objective of improving the quality and reliability of power supply to consumers with 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. The scheme will result in upgradation of the distribution network including network strengthening and system automation, DT augmentation, creation of new substations, upgradation of sub-stations, HVDS, Agriculture feeder segregation, Ring Mains supply systems (RMUs), uprating of conductors, cabling works etc. Disaster resilient infrastructure works specified in the Disaster Management Plan for Power Sector issued by Central Electricity Authority and the Disaster Resilient Works specified by National Disaster Management Authority (NDMA), are also allowed for financial assistance under the RDSS.

Details of sanction under RDSS for the Southern States is attached as **Annexure.**

ANNEXURE

**ANNEXURE REFERRED TO IN REPLY TO PARTS (b) & (c) OF UNSTARRED
QUESTION NO. 315 ANSWERED IN THE RAJYA SABHA ON 05.12.2023**

(in Rs. Cr)

Sl. No.	State	Sanction cost: Distribution Infrastructure Works	GBS: Distribution Infrastructure Works	Sanction cost: Smart Metering Works	GBS: Smart Metering Works
1	Andhra Pradesh	9,292.84	5,575.7	4,127.85	815.39
2	Tamil Nadu	9,066.27	5,439.76	19,235.36	3,398.45
3	Kerala	2,346.81	1,408.08	8,231.18	1,413.33
Total		20,705.92	12,423.54	31,594.39	5,627.17

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.316
ANSWERED ON 05.12.2023

REGULAR CHECKING OF HIGH-TENSION ELECTRIC POLES/WIRES

316 # DR. KALPANA SAINI:

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

the latest details of steps taken by the Central Government in coordination with various States including the State Government of Uttarakhand for regular checking of the strength of high-tension electric poles/wires after some incidents of falling of high-tension electric poles/wires reported in several States?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

As per Electricity Act 2003, distribution of electricity is a licensed activity and it is the duty of the respective distribution licensee to develop and maintain an efficient, safe and economical distribution system in its area of supply. Hence, it is the responsibility of the distribution utilities to take measures required for upgradation and maintenance of distribution system including checking the strength of poles/wires of HT/ LT lines to maintain quality and reliable power supply in its area of operation. Uttarakhand Power Corporation have reported that all the electrical poles/wires are thoroughly checked/inspected as per relevant IS standard before installation and periodic patrolling is carried out for preventive maintenance as per prevailing Central Electricity Authority (CEA) Regulations and Manual.

CEA (Measures relating to Safety and Electric Supply) Regulations, 2023, specify safety measures for construction, operation and maintenance of power stations, sub-stations, transmission and distribution lines. It lays down the safety measures for electrical installations, overhead lines and others. These regulations are to be applied to all electrical installations, which encompass electrical plants, electric lines, and individuals or entities involved in activities such as electricity generation, transmission, distribution, trading, supply, or consumption.

CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022, have provisions for strengthening of poles/ wires in disaster prone areas/ coastal areas:

- i. In coastal areas, higher strength poles like rail poles or spun poles shall be used or underground cables shall be used.
- ii. Suitable insulating paint shall preferably be provided on bare conductors in coastal areas to prevent corrosion.

CEA has prepared “Report of Task Force on Cyclone Resilient Robust Electricity Transmission and Distribution (T&D) Infrastructure in Coastal Area” in May, 2021, which was circulated to all the States by Ministry of Power in June, 2021, to take the measures suggested in the Report for dealing with and minimizing the impact of cyclones.

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.317
ANSWERED ON 05.12.2023

COMPETITIVE BIDDING IN TRANSMISSION SECTOR

317 SHRI MOHAMMED NADIMUL HAQUE:

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

- (a) the reasons for hyper-competitive bidding in transmission sector in FY 2021 to FY 2023 and its impact on tariffs, if any;
- (b) the details of all inter-state transmission projects awarded to industry players along with their winning quotes under competitive bidding as well as nomination basis between FY2021 to FY 2023;
- (c) the Government's view on whether hyper-competitive bidding is distorting the level playing field in the sector and thereby impacting the sector in the long run; and
- (d) the steps being planned to check hyper-competitive bidding to ensure a level-playing field?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a), (c) & (d): Transmission projects are generally awarded for implementation through Tariff Based Competitive Bidding (TBCB) route. TBCB route was introduced to bring competition in development of the transmission infrastructure in the country. Any apprehension about “hyper-competitive bidding in transmission sector” in FY 2021 to FY 2023 is unfounded.

(b) : Details of Transmission projects awarded through Tariff Based Competitive Bidding (TBCB) route during the period FY2021 to FY2023 along with the yearly discovered tariff are enclosed at **Annexure-I**. Details of Transmission projects along with the total estimated cost awarded on nomination basis during the same period is given at **Annexure-II**.

ANNEXURE-I

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 317 ANSWERED IN THE RAJYA SABHA ON 05.12.2023

Transmission projects awarded under Tariff Based Competitive Bidding (TBCB) route during the period from FY2021 to FY2023

Sl. No.	Transmission Project	Name of the successful Bidder	Tariff discovered (Yearly) (In Rs Cr.)	BPC
FY 2020-21				
1	Western Region Strengthening Scheme- XIX (WRSS-XIX) and North Eastern Region Strengthening Scheme- IX (NERSS-IX)	Sterlite Grid 13 Limited	256.59	PFCCCL
2	Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase-II Part-F	Power Grid Corporation of India Limited	140.40	PFCCCL
3	Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase II -Part A.	M/s Power Grid Corporation of India Limited	39.05	RECPDCL
FY 2021-22				
4	Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase-II Part-D	Power Grid Corporation of India Limited	99.70	PFCCCL
5	Evacuation of power from RE sources in Koppal Wind Energy Zone (Karnataka) (2500MW)	ReNew Transmission Venture Pvt. Ltd.	61.13	PFCCCL
6	Establishment of new 220/132kV substation at Nangalbibra	Sterlite Grid 26 Ltd.	55.86	PFCCCL
7	Evacuation of power from RE sources in Karur/ Tiruppur Wind Energy Zone (Tamil Nadu) (1000MW) under Phase-I	Adani Transmission Ltd.	18.35	PFCCCL
8	Transmission scheme for evacuation of 3 GW RE injection at Khavda P.S. under Phase-I	Adani Transmission Ltd.	100.03	PFCCCL
9	Transmission system strengthening for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase II -Part B	M/s Power Grid Corporation of India Limited	72.89	RECPDCL
10	Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under phase-II- Part C.	M/s Power Grid Corporation of India Limited	163.71	RECPDCL
11	Transmission System for evacuation of power from RE Projects in Osmanabad area (1 GW) in Maharashtra.	Consortium of Indi Grid 1 Limited and Indi Grid 2 Limited	16.74	RECPDCL

12	Transmission Scheme for Solar Energy Zone in Gadag (2500 MW), Karnataka - Part A.	M/s ReNew Transmission Ventures Private Limited	29.7	RECPDCL
FY 2022-23				
13	Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase-II Part-G	Power Grid Corporation of India Limited	148.41	PFCCCL
14	400 kV Khandukhal (Srinagar) - Rampura (Kashipur) D/C Line	Megha Engineering & Infrastructures Limited	58.72	PFCCCL
15	Transmission System for Evacuation of Power from Pakaldul HEP in Chenab Valley HEPs - Connectivity System	Sterlite Grid 24 Limited	38.85	PFCCCL
16	Western Region Expansion Scheme-XXVII (WRES-XXVII)	Power Grid Corporation of India Limited	29.72	PFCCCL
17	Western Region Expansion Scheme-XXVIII (WRES-XXVIII)" & "Western Region Expansion Scheme-XXIX (WRES-XXIX)	Power Grid Corporation of India Limited	28.69	PFCCCL
18	Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-E	Power Grid Corporation of India Limited	135.22	PFCCCL
19	Transmission system for evacuation of power from RE projects in Rajgarh (2500 MW) SEZ in Madhya Pradesh.	M/s G R Infraprojects Limited	40.82	RECPDCL
20	Transmission system for evacuation of power from Neemuch SEZ	M/s Power Grid Corporation of India Limited	78.38	RECPDCL
21	System Strengthening Scheme for Eastern and North Eastern Regions	M/s Power Grid Corporation of India Limited	35	RECPDCL
22	Transmission Scheme for Solar Energy Zone in Gadag (1500 MW), Karnataka: Part A-Phase-II.	M/s ReNew Transmission Ventures Private Limited	24.54	RECPDCL
23	ISTS Network Expansion scheme in Western Region & Southern Region for export of surplus power during high RE scenario in Southern Region.	M/s Adani Energy Solutions Limited	213.48	RECPDCL
24	Inter-regional ER-WR Interconnection.	M/s Power Grid Corporation of India Limited	29.01	RECPDCL
25	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part B, Gujarat.	M/s Power Grid Corporation of India Limited	110.64	RECPDCL

26	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part C, Gujarat	M/s Power Grid Corporation of India Limited	281.70	RECPDCL
27	Transmission Network Expansion in Gujarat associated with integration of RE projects from Khavda potential RE zone.	M/s Power Grid Corporation of India Limited	77.33	RECPDCL
28	Establishment of Khavda Pooling Station-2 (KPS2) in Khavda RE Park.	M/s Power Grid Corporation of India Limited	69.68	RECPDCL
29	Establishment of Khavda Pooling Station-3 (KPS3) in Khavda RE Park.	M/s Power Grid Corporation of India Limited	75.53	RECPDCL
30	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda P.S. under Phase-II – Part A, Gujarat	M/s Adani Energy Solutions Limited	118.90	RECPDCL

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 317 ANSWERED IN THE RAJYA SABHA ON 05.12.2023

Transmission projects (ISTS) awarded on nomination basis [under Regulated Tariff Mechanism (RTM)] during the period from FY2021 to FY2023 are given below:

Sl. No.	Transmission Project	Estimated Cost (in Rs. Crores)
FY 2020-21		
1	Transmission system for evacuation power from Pakaldul HEP in Chenab Valley HEPs - LTA System	252
2	Transmission system for power evacuation from Arun-3 (900MW) HEP, Nepal of M/s SAPDC - Indian Portion	179
3	Eastern region Strengthening scheme (ERSS)-XXVI	3
4	North Eastern region Strengthening scheme (NERSS)-XI	43
5	North Eastern region Strengthening scheme (NERSS)-XII	576
6	North Eastern region Strengthening scheme (NERSS)-XIII	76
7	North Eastern region Strengthening scheme (NERSS)-XIV	75
FY 2021-22		
8	Implementation of 400kV bays for RE generators at Bhadla-II PS, Fatehgarh-II PS	45
9	Implementation of 400 kV bays for RE generators at Fatehgarh-III (erstwhile Ramgarh-II) PS	9
10	Implementation of 220 kV bay at Shahjahanpur (PG) 400/220 substation	4
11	Implementation of 1x80 MVAR 765 kV Spare Reactor at Bhadla-II S/s	6
12	Implementation of the 1x500 MVA, 400/220 kV ICT (8th) at Bhadla pooling Station	35
13	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part E1	435
14	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part E2	245
15	Transmission system for evacuation of power from REZ in Rajasthan (20GW) under Phase-III Part J	225
16	System Strengthening scheme for reconductoring of portion of Dulhasti-Kishtwar-Kishenpur 400 kV (Quad) S/c	13
17	Grant of 400 kV & 220 kV bays to RE generators at Fatehgarh-III (erstwhile Ramgarh-II) PS under ISTS	75
18	1x500 MVA, 400/220 kV ICT augmentation (3rd) at Sohawal (PG) under system strengthening	30
19	One no of 220 kV bay at Chamera Pooling point for 2nd Circuit stringing of 220 kV Karian – Chamera Pool line under implementation by HPPTCL with time fame of December 21.	4
20	220 kV bays at 400 kV substation PGCIL Khatkar (Jind) &Naggal (Panchkula) substation	16
21	Implementation of 220 kV bays for RE generators and 400/220kV ICTs at Bikaner-II PS	70
22	Augmentation of transformation capacity at 400/220 kV Ludhiana (PG) Substation:	14
23	Augmentation of Transformation capacity at 400/220 kV Kurukshetra (PG) & Patiala (PG) Substations:	54
24	Implementation of 2 nos. of 220kV line bays at 400/220 kV Jind (PG) S/s	8
25	Requirement of 220 kV line bay at 400/220kV Amritsar (PG) by PSTCL	5
26	Transmission System Strengthening for ‘Srinagar – Leh Transmission System’	277
27	ERES-XXVI	27
28	ICT Augmentation at 2x315 MVA, 400/220 kV Shujalpur (PG) substation	33
29	Regional System Strengthening scheme to mitigate the overloading of 400 kV NP Kunta-Kolar S/C line	123

30	Augmentation of transformation capacity at exist in Hiriyur and Kochi S/stns	53
31	Restoring of one circuit of Kudankulam - Tuticorin PS 400 kV (quad) D/c line at Tirunelveli to control loadings/un-balancing on Kudankulam - Tirunelveli 400 kV (quad) lines	1
32	implementation of 1no 230 kV bay at Tuticorin-II GIS PS	5
33	Transmission System strengthening beyond Kolhapur for export of power from SR to WR - Re-conductoring of Kolhapur (PG) – Kolhapur 400 kV D/c line	54
34	Augmentation of 1x500MVA 400/220kV ICT (3rd) at Bhatapara (PG)	30
35	Transmission Network Expansion in Gujarat to TC from ISTS: Part B	2077
36	Transmission Network Expansion in Gujarat to TC from ISTS: Part C	148
37	Transmission Network Expansion in Gujarat to TC from ISTS: Part A	70
38	Requirement of 765 kV spare (1-Ph) Reactors units at 765 kV Warangal New	5.5
39	Requirement of 765 kV spare (1-Ph) Reactors units at 765 kV Chilkaluripeta	5.5
40	Scheme to bypass NGR to use Switchable Line Reactor as Bus Reactor at 765kV Chilkaluripeta	0.32
41	1 no. of 400 kV bay at 765/400 kV Kurnool (New)	9
42	Scheme to control fault level at Indore S/s	15
43	Upgradation of 40% FSC associated with Wardha – Aurangabad 400kV D/c line at Wardha S/s from 40kA to 50kA short circuit level	15
44	Scheme for fault level control at Dehgam (PG) & Ranchodpura (GETCO) S/s	1
45	Western Region Expansion Scheme-XXVI (WRES-XXVI)	95
46	Augmentation of transformation capacity at Tuticorin-II (GIS) PS by 1x500 MVA, 400/230kV ICT (5 th)	49
47	Transmission system for evacuation of RE power from renewable energy parks in Leh (5GW Leh- Kaithal transmission corridor)	20,773.70
FY 2022-23		
48	Implementation of 1 no. of 400 kV line bay at 400/220kVBikaner-II PS for interconnection of 1000 MW Solar Project of SJVN Ltd.	11.62
49	Augmentation of Transformation capacity at Bhinmal (PG) S/s by 1x315 MVA, 400/220kV ICT (3rd).	17.61
50	Eastern Region Expansion Scheme-XXVII (ERES-XXVII)	47.62
51	North Eastern Region Expansion Scheme-XVII (NERES-XVII)	2
52	Augmentation of Transformation Capacity by 1x500 MVA, 400/220kV ICT (3rd) at Raigarh (PG) S/s.	45.52
53	Western Region Expansion Scheme-XXX (WRES-XXX):	26.64
54	Implementation of 2 nos. of 220 kV line bays at 400/220kV Bikaner-II PS for interconnection of solar projects (ACME Solar Holdings Pvt. Ltd., Prerak Greentech Pvt. Ltd.)	38.56
55	Augmentation of Transformation Capacity by 1x500 MVA, 400/230kV ICT (4th) at Arasur substation:	61
56	Augmentation of Transformation Capacity by 1x500 MVA, 400/230kV ICT (4th) at Hosur substation:	46
57	Western Region Expansion Scheme-XXV (WRES-XXV)	210
58	Augmentation of Transformation Capacity by 1x500MVA 400/220kV ICT (6th) at Fatehgarh-II PS to cater to the N-1 contingency requirement at Fatehgarh-II PS.	55.68
59	Augmentation of Transformation capacity by 1x500MVA, 400/220kV ICT (3rd) to cater to the N-1 contingency requirement at Bikaner PS.	45.52
60	Reactive power compensation on 400kV transmission lines in NR.	76.1
61	Eastern Region Expansion Scheme-XXXI (ERES-XXXI).	35.39
62	North Eastern Region Expansion Scheme-XIX (NERES-XIX).	15.6
63	Augmentation of transformation capacity at Kallam PS by 2x500 MVA, 400/220 kV ICTs (3rd & 4th) along with 220kV bays for RE interconnection	156.89
64	Augmentation of ISTS for interconnection of HVPNL transmission schemes	117.05

65	Scheme to relieve high loading of WR-NR Inter Regional Corridor (400 kV Bhinmal Zerda line)	288.69
66	Eastern Region Expansion Scheme XXIX (ERESXXIX)	422.23
67	Transmission system for evacuation of power from Rajasthan REZ PhIV (Part-1) (Bikaner Complex) Part-E	368
68	Supply and Installation of OPGW on existing main lines which are to be LILOed under various transmission schemes.	59.5
69	Implementation of 1 no. 220kV line bay at Bhuj PS for providing Connectivity to M/s NTPC Renewable Energy Ltd. (300MW)	5.84
70	Transmission System for providing connectivity to M/s VEH Jayin Renewables Pvt. Ltd. at Rajgarh (PG) S/s	29.33
71	Western Region Expansion Scheme XXXI (WRES-XXXI): Part C	86.01
72	Western Region Expansion Scheme XXXIII (WRES-XXXIII): Part D	77.52
73	Implementation of 2 nos. of 220 kV line bays at 400/220 kV Panchkula (Barwala) (PG) S/s for interconnection with 220 kV Dera Bassi S/s.	11.68
74	Replacement of 1x315 MVA 400/220kV ICT (ICT-1) at 400/220 kV Ludhiana (PG) S/s with 1x500 MVA 400/220kV ICT	26.98
75	Replacement of 1x250 MVA, 400/220 kV ICT at 765/400/220 kV Moga (PG) S/s with 1x500 MVA 400/220kV ICT along with associated works at 220kV level.	27.03
76	Augmentation of Transformation Capacity by 1x500 MVA, 400/220kV ICT (3rd) at 400/220 kV Patran (GIS) S/s	65.19
77	Implementation of 1 no. of 220 kV line bay at 400/220kV Bikaner-II PS for interconnection of solar project (M/s NHPC Ltd.):	29.21
78	Eastern Region Expansion Scheme-XXX (ERES-XXX)	11.64
79	Eastern Region Expansion Scheme-XXXIII (ERES-XXXIII)	23.08
80	North Eastern Region Expansion Scheme-XVIII (NERES-XVIII)	11.44
81	North Eastern Region Expansion Scheme-XX (NERES-XX)	77.04
82	Implementation of 1 no. 400kV line bay at Kurnool New S/s for providing Connectivity to M/s Greenko AP01 IREP Pvt. Ltd. (2 nd 400kV line bay for M/s Greenko)	8.55
83	Eastern Region Expansion Scheme-XXXII (ERES-XXXII)	25.83
84	Implementation of 2 no. of 220 kV line bays at 400/220kV Bikaner-II PS for interconnection of RE power park of M/s ALF Solar Amarsar Pvt. Ltd.	11.68
85	Augmentation of transformation capacity by 1x500MVA, 400/220kV ICT (4th) at Mysore substation in Karnataka	52.51
86	Western Region Expansion Scheme XXXIII (WRES-XXXIII): Part A	126.09
87	Transmission scheme for evacuation of 4.5 GW RE injection at Khavda PS under Phase II- Part D	221
88	ICT Augmentation at Navsari (New) S/s associated with integration of additional 7 GW RE power from Khavda RE park under Phase-III	58.52
89	Western Region Expansion Scheme XXXIII (WRES-XXXIII): Part B1	19
90	Western Region Expansion Scheme XXXIII (WRES-XXXIII): Part C1	0.5

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.318
ANSWERED ON 05.12.2023

EXPANSION OF ELECTRIC GRID

318 SHRI S NIRANJAN REDDY:

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

- (a) the details of the target and the actual power lines set up in the last five years in the country;
- (b) whether Government has set a target for grid expansion in the future, given the anticipated increase in energy demand;
- (c) the details of inclusion of renewable energy capacity in the Indian grid; and
- (d) whether it is a fact that the gap between the existing renewable energy capacity and its actual usage is due to the inability of the Indian grid to accommodate higher shares of renewable energy?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) : The details of target and achievement in respect of Transmission lines (220kV and above) set up in the last five (5) years in the country are given below:

Year	Target Power Line (in ckm)	Actual Power Line (in ckm)
2018-19	22,647	22,437
2019-20	23,621	11,664
2020-21	15,791	16,750
2021-22	19,255	14,895
2022-23	14,581	14,625
2023-24 (Up to October-23)	11,420	7,026
Total	1,07,315	87,397

(b) : The capacity of National Grid is being expanded on a continuous basis commensurate with the increasing electricity demand and increase in generation capacity. On an average about 16,000 ckm of transmission lines and 75,000 MVA of transformation capacity (220 kV and above voltage level) are being added per year in the country.

.....2.

(c) : As on 31st October 2023, about 179 GW Renewable Energy capacity (including hydro) is installed in the Indian Grid. The details are given below:

Category	Installed Capacity (in MW)
Solar	72,018
Hydro	51,837
Wind	44,292
Biomass	10,262
Others	573
Total	1,78,982

(d) : The National Grid is fully capable of accommodating the generation from existing Renewable Energy capacity.

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.319
ANSWERED ON 05.12.2023

STEPS TAKEN TO REDUCE CARBON EMISSIONS

319 SHRI VIVEK K. TANKHA:

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

- (a) the steps taken by Government to reduce carbon emissions from power projects;
- (b) the number of new power projects that have been established by Government since 2018, the details thereof, year-wise and State-wise;
- (c) whether Government has shut down any thermal power plant and replaced it with a renewable and non-polluting project, if so, the details thereof; and
- (d) the plans contemplated by Government to shift from pollution causing thermal plants to non-polluting energy projects?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) : The steps taken by Ministry of Power to reduce carbon emissions from power projects are as follows:

- i. Ministry of Power is implementing a market-based mechanism namely Perform, Achieve and Trade (PAT) scheme to enhance energy efficiency in energy intensive large industries including Thermal Power Stations consuming more than 30,000 tonne of oil equivalent (toe) of energy per annum. Under this scheme, 226 number of Thermal Power Station are covered accounting for capacity of around 197 GW. This scheme mandates all Thermal Power Stations to reduce their Net Heat Rate over a period of three year cycle which in turn reduces coal consumption and hence result in CO₂ emissions reduction. As on 2020-21, saving in terms of energy is about 7.21 million tonnes of oil equivalent (mtoe), which is equivalent to emission reduction of about 27.51 million tonnes of CO₂ from these Thermal Power Plants (TPPs).
- ii. Many TPPs have adopted use of efficient technologies i.e. from subcritical to supercritical and now using ultra-supercritical technology in order to improve efficiency, thereby reducing coal consumption and emissions. A total capacity of Supercritical/ Ultra-supercritical units of 63830 MW (92 Units) and 2120 MW (03 units) has been commissioned respectively till 31.10.2023.
- iii. The capacity of about 8059.92 MW comprising 99 units of inefficient and old thermal power generation units has already been retired from Jan, 2018 to 15.10.2023.

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- iv. Policy on Bio-mass Utilization for Power Generation through Co-firing in Domestic Coal based Power Plants was issued on 08.10.2021 for the use of agro residue-based biomass which has mandated usage of biomass co-fired along with coal for thermal power plants.
- v. A total of 186.46 GW capacity from non-fossil fuel-based energy resources has been installed in the country as on 31.10.2023, which includes 178.98 GW Renewable Energy and 7.48 GW Nuclear Power. This is about 43% of our total power generation capacity. By 20230, India will have 50 percent of its installed power generation capacity from non-fossil sources.

(b) : As on 31-10-2023 (Financial Year 2023-24), National Thermal Capacity of 25,091.91 MW have been added to the grid since FY 2018-19. The details are **Annexed**.

(c) & (d) : As per Section 7 of the Electricity Act, 2003, generation is a de-licensed activity and phasing out/retirement of units is decided by generating utilities/companies based on their own techno-economic and commercial considerations. To promote the generation of Renewable Energy in the country since 2018, Government of India has taken the following steps:

- (i) Permitting Foreign Direct Investment (FDI) up to 100 percent under the automatic route.
- (ii) Waiver of Inter State Transmission System (ISTS) charges for inter-state sale of Solar, Wind, Green Hydrogen/Green Ammonia, Pumped Storage Plants & Energy Storage Sources.
- (iii) Notification of trajectory for Renewable Purchase Obligation (RPO) up to the year 2029-30.
- (iv) Setting up of Ultra Mega Renewable Energy Parks to provide land and transmission connectivity to RE developers for installation of RE projects at large scale.
- (v) Schemes such as Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM), Solar Rooftop Phase II, 12000 Mega Watt (MW) Central Public Sector Undertaking (CPSU) Scheme Phase II, etc.
- (vi) Laying of new transmission lines and creating new sub-station capacity under the Green Energy Corridor Scheme for evacuation of renewable power.
- (vii) Standard Bidding Guidelines for tariff based competitive bidding process for procurement of Power from Grid Connected Solar photovoltaic (PV), Wind and Solar Wind hybrid Projects.
- (viii) Notification of Promoting Renewable Energy through Green Energy Open Access Rules 2022.
- (ix) Launch of Green Term Ahead Market (GTAM) to facilitate sale of Renewable Energy Power through exchanges.

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 319 ANSWERED IN THE RAJYA SABHA ON 05.12.2023

Thermal Power Projects commissioned since FY-2018							
	Sector	State	Project Name	Implementing Agency	Fuel	Unit No	Cap. added (MW)
FY 2018-19							
1	Central	Assam	Bongaigaon TPP	NTPC	Coal	U-3	250
2	Central	Bihar	Nabi Nagar TPP	NTPC & BRBCL	Coal	U-3	250
3	Central	Madhya Pradesh	Gadarwara TPP	NTPC	Coal	U-1	800
4	Central	Maharashtra	Solapur STPP	NTPC	Coal	U-2	660
Total Central Sector							1960
5	State	Madhya Pradesh	Shri Singhaji TPP St-II	MPPGCL	Coal	U-3	660
6	State	Madhya Pradesh	Shri Singhaji TPP St-II	MPPGCL	Coal	U-4	660
7	State	Telangana	Kothagudem TPS St-VII	TSGENCO	Coal	U-1	800
8	State	Rajasthan	Chhabra TPP Extn	RRVUNL	Coal	U-6	660
9	State	Assam	Lakwa Replacement Power Project (7x9.965 MW)	APGCL	Gas	GT	69.76
Total State Sector							2849.76
10	Private	Madhya Pradesh	Mahan TPP / Essar Power MP Ltd. / Chinese	Essar Power MP Ltd.	Coal	U-2	600
11	Private	Chhattisgarh	Uchpinda TPP	RKM Power	Coal	U-4	360
12	Private	West Bengal	Dishergarh TPS	IPCL	Coal	U-1	12
Total Private Sector							972
Total F Y 2018-19							5781.76
FY 2019-20							
13	Central	Bihar	Nabi Nagar STPP	NPGCL	Coal	U-1	660
14	Central	Madhya Pradesh	Khargone STPP St-I	NTPC	Coal	U-1	660
15	Central	Madhya Pradesh	Khargone STPP St-I	NTPC	Coal	U-2	660
16	Central	Uttar Pradesh	Tanda TPP St- II	NTPC	Coal	U-5	660
17	Central	Odisha	Darlipalli STPP St-I	NTPC	Coal	U-1	800
18	Central	Tamil Nadu	Neyveli New TPP	NLC	Lignite	U-1	500
Total Central Sector							3940
19	State	Gujarat	Wanakbori TPS Extn.	GSECL	Coal	U-8	800
20	State	Odisha	Ib valley TPP	OPGC	Coal	U-3	660
21	State	Odisha	Ib valley TPP	OPGC	Coal	U-4	660
22	State	Rajasthan	Suratgarh SCTPP	RRVUNL	Coal	U-7	660
Total State Sector							2780
23	Private	Madhya Pradesh	BLA Power Pvt. Ltd(Niwari) TPP	BLA Power Pvt. Ltd	Coal	U-2	45
Total Private Sector							45
Total FY 2019-20							6765

FY 2020-21							
24	Central	Chhattisgarh	Lara STPP	NTPC	Coal	U-2	800
25	Central	Uttar Pradesh	Meja STPP	JV of NTPC & UPRVUNL	Coal	U-2	660
26	Central	Tamil Nadu	Neyveli New TPP	NLC	Lignite	U-2	500
27	Central	Madhya Pradesh	Gadarwara STPP	NTPC	Coal	U-2	800
28	Central	Uttar Pradesh	Tanda St-II	NTPC	Coal	U-6	660
29	Central	Bihar	Nabi Nagar STPP	NPGL	Coal	U-2	660
Total Central Sector							4080
30	State	Assam	Namrup CCGT-Gas	APGCL	Gas	ST	36.15
31	State	Telangana	Bhadradi TPP	TSGENCO	Coal	U-1	270
32	State	Telangana	Bhadradi TPP	TSGENCO	Coal	U-2	270
33	State	Telangana	Bhadradi TPP	TSGENCO	Coal	U-3	270
Total State Sector							846.15
Total F Y 2020-21							4926.15
FY 2021-22							
34	Central	Odisha	Darlipalli STPP St-I	NTPC	Coal	U-2	800
35	Central	Bihar	Barh STPP, Stage-I	NTPC	Coal	U-1	660
36	Central	Bihar	Nabi Nagar TPP	BRBCL	Coal	U-4	250
37	Central	Bihar	Nabi Nagar STPP	NPGL	Coal	U-3	660
Total Central Sector							2370
38	State	Rajasthan	Suratgarh SCTPP	RRVUNL	Coal	U-8	660
39	State	Telangana	Bhadradi TPP	TSGENCO	Coal	U-4	270
40	State	Uttar Pradesh	Harduaganj Expn-II	UPRVUNL	Coal	U-1	660
Total State Sector							1590
41	Private	Tamil Nadu	Tuticorin TPP, St-IV	SEPC	Coal	U-1	525
Total Private Sector							525
Total FY 2021-22							4485
FY 2022-23							
42	Central	Jharkhand	North Karanpura STPP	NTPC	Coal	U-1	660
Total Central Sector							660
43	State	Andhra Pradesh	Sri Damodaram Sanjeevaiah TPP St-II	APPDCL	Coal	U-1	800
Total State Sector							800
Total FY 2022-23							1460
FY 2023-24							
44	Central	Bihar	Barh STPP, Stage-I	NTPC	Coal	U-2	660
45	Central	Telangana	Telangana STPP St- I	NTPC	Coal	U-1	800
Total Central Sector							1460
46	Private	Uttarakhand	Kashipur CCPP, Ph-II	M/s SEPL	R-LNG	Mod-2	214
Total Private Sector							214
Total FY 2023-24 (upto 31-10-2023)							1674
Grand Total 2018-24							25,091.91

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.320
ANSWERED ON 05.12.2023

LOSSES IN TANGEDCO

320 SHRI C. VE. SHANMUGAM:

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

- (a) whether Government is aware that the TANGENDCO in Tamil Nadu is incurring huge losses;
- (b) if so the details thereof;
- (c) whether it is also a fact that this Company is going to be trifurcated to show 'reduced losses' to the public;
- (d) if so, the details thereof;
- (e) the details of the funds allocated to TANGEDCO by the Centre through various agencies to tide over the crisis; and
- (f) the steps taken by Government in this regard?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) & (b) : As per the 'Report on Performance of Power Utilities' published by Power Finance Corporation (PFC), Profit/Loss for Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO) for the years FY 2019-20 to FY 2021-22 are as under:

Rs Crore

TANGEDCO	FY 2019-20	FY 2020-21	FY 2021-22
Profit/ (Loss) on accrual basis (PAT)	(11,965)	(13,407)	(11,955)

(c) & (d) : There is no decision yet on reorganization.

(e) & (f): The details of financial assistance provided by Central Government in the form of Grant under various schemes and through loan from REC & PFC are given at **Annexure**.

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PARTS (e) & (f) OF UNSTARRED QUESTION NO. 320 ANSWERED IN THE RAJYA SABHA ON 05.12.2023

(i) Financial assistance (loan) from REC& PFC to TANGEDCO (from 23.09.2008 to 30.06.2023) is as follows:

Categories	Sanction (Rs.cr)	Released (Rs.cr)	Outstanding (Rs.cr) (As on 21.11.2023)
Distribution Projects	13,464.07	7,927.61	6,242.12
Generation Projects	55,556.56	43,503.18	32,133.16
Large Hydro Projects> 25MW	1,450.00	1,142.64	1,128.31
Others	585.66	386.68	384.75
R&M	1,503	1,314	752
Revolving Bill Payment Facility (RBPF)	15,000	14,655	13,950
Special Long Term Transitional Loan(SLTTL)	30,230	26,797	26,795
Total	1,25,828.59	95,725.19	81,385.82

(ii) Financial assistance (Grant from Government of India) to TANGEDCo:

(a) Under earlier schemes:

Schemes	Outlay sanctioned (Rs. Cr.)	GBS sanctioned (Rs. Cr.)	GBS released (Rs. Cr.)
DDUGJY	1,344	919	885
IPDS	1,745	1,050	1,049
R-APDRP	2,786	789	779

(b) Under ongoing Revamped Distribution Sector Scheme (RDSS):

	Outlay sanctioned (Rs. Cr.)	GBS Sanctioned (Rs. Cr.)	GBS released till date as per the scheme guidelines (Rs. Cr.)
Loss Reduction Works	9,066	5,440	267.97
Smart Metering Works	19,235	3,398	0
