GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
STARRED QUESTION NO.41
ANSWERED ON 25.07.2024

CARBON TRADING MARKET

***41 DR. PRADEEP KUMAR PANIGRAHY:**

Will the Minister of POWER be pleased to state:

(a) whether the Government has taken any steps to ensure simpler validation and verification process of carbon credits to quickly scale-up ecologically sustainable practices;

(b) if so, the details of such initiatives proposed by the Government in this regard; and

(c) the future projection of the carbon trading market during the next five years?

A N S W E R

THE MINISTER OF POWER

(SHRI MANOHAR LAL)

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

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STATEMENT

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) IN RESPECT OF LOK SABHA STARRED QUESTION NO.41 FOR REPLY ON 25.07.2024 REGARDING CARBON TRADING MARKET ASKED BY DR. PRADEEP KUMAR PANIGRAHY

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(a) & (b) : The Government of India have notified the Carbon Credit Trading Scheme (CCTS) in June, 2023. Under this scheme the Bureau of Energy Efficiency (BEE) has published Accreditation Procedure and Eligibility Criteria for Accredited Carbon Verification Agencies. BEE has also published detailed procedure for Compliance Mechanism which includes validation and verification process of carbon credits. The said procedures are broadly in alignment of the global standards.

The CCTS includes two mechanisms namely Compliance Mechanism and Offset Mechanism. The compliance mechanism is a mandatory scheme where Greenhouse Gas Emission (GHG) Intensity (t CO2/t) targets would be given to industries from energy intensive sectors and based on performance against the targets, the industries will be issued or required to purchase the carbon credit certificates.

The offset mechanism is a voluntary mechanism under which entities can register their GHG mitigation projects including ecologically sustainable practices. Such projects would be eligible for issuance of carbon credits based on the validation and verification of GHG emission reduction.

(c) : The growth of Indian Carbon Market in the next five years would depend on several key factors including evolving regulatory framework, voluntary commitments by entities seeking carbon credits, technology availability and investment capabilities of entities.

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GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
STARRED QUESTION NO.48
ANSWERED ON 25.07.2024

STREET LIGHTING NATIONAL PROGRAMME

***48 SHRI JANARDAN SINGH SIGRIWAL:**

Will the Minister of POWER be pleased to state:

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

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

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

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

A N S W E R

THE MINISTER OF POWER

(SHRI MANOHAR LAL)

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

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STATEMENT

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) IN RESPECT OF LOK SABHA STARRED QUESTION NO. 48 FOR REPLY ON 25.07.2024 REGARDING STREET LIGHTING NATIONAL PROGRAMME ASKED BY SHRI JANARDAN SINGH SIGRIWAL.

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(a) : Street Lighting National Programme (SLNP) was launched on 5th January 2015 to replace conventional Street Lights with energy efficient LED Street Lights.

Energy Efficiency Services Limited (EESL) a joint venture of CPSE under the Ministry of Power, was designated as the implementing agency. EESL implemented this program in Urban Local Bodies (ULBs), Gram Panchayats (GPs) and Government premises across various States.

The programme is primarily implemented through Energy Service Company (ESCO) model in local bodies, both urban or rural, without requiring any upfront investment. EESL takes full responsibility for the project, including the procurement, installation, and maintenance of LED lights for a pre-determined period, typically up to seven years. Local bodies repay EESL through a share of monthly savings achieved on their electricity bills due to the energy-efficient LEDs. Under this programme, till date approximately 1.31 crores (Annexure-I) conventional Street Lights have been replaced resulting in an electricity savings of approximately 9 billion units annually.

(b) & (c) : Under SLNP, EESL is implementing projects to replace conventional street lights with energy efficient LED street lights in various States including Bihar. Till date EESL has installed 5,44,190 LED Streetlights in 116 ULBs in Bihar (Annexure-II).

(d) : Government of India has not allotted any budget for SLNP program, as the programme is implemented by EESL in self-financing mode. EESL has made an investment of approximately Rs 210 crores for implementation of SLNP in Bihar from its own funds (Annexure-II).

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ANNEXURE-I

ANNEXURE REFERRED TO IN PART (a) OF THE STATEMENT LAID IN REPLY TO STARRED QUESTION NO. 48 ANSWERED IN THE LOK SABHA ON 25.07.2024 REGARDING STREET LIGHTING NATIONAL PROGRAMME

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Sr. No.	State Name	Total LED Street Lights installed (Nos)
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	3,87,896
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	1,000
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
25	TELANGANA	17,07,716
26	TRIPURA	76,426
27	UTTAR PRADESH	12,90,949
28	UTTARAKHAND	1,33,511
29	WEST BENGAL	94,198
	Total	1,31,10,745

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ANNEXURE-II

ANNEXURE REFERRED TO IN PARTS (b), (c) AND (d) OF THE STATEMENT LAID IN REPLY TO STARRED QUESTION NO. 48 ANSWERED IN THE LOK SABHA ON 25.07.2024 REGARDING STREET LIGHTING NATIONAL PROGRAMME

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The details of the Nos. of LED Streetlights in Nos. of Urban Local Bodies (ULBs) in the State of Bihar are as under.

SLNP-BIHAR ULB wise Detail		Total LED Street Lights Installed	Capital Investment by EESL (Rs. In Cr.)
Sr. No.	ULB Name		
1	Patna Nagar Nigam	86740	39.99
2	Gaya Nagar Nigam	18585	8.02
3	Purnia Nagar Nigam	17325	7.01
4	Bhagalpur Nagar Nigam	10302	4.85
5	Hajipur Nagar Parishad	8486	4.22
6	Danapur Nagar Parishad	13229	5.61
7	Muzaffarpur Nagar Nigam	14061	6.34
8	Darbhanga Nagar Nigam	14508	6.17
9	Buxar Nagar Parishad	7194	3.10
10	Begusarai Nagar Nigam	8926	3.48
11	Katihar Nagar Nigam	9645	4.19
12	Bettiah Nagar Parishad	9088	3.68
13	DehriDalmianagar Nagar Parishad	10422	3.95
14	Munger Nagar Nigam	10438	3.64
15	Jehanabad Nagar parishad	6311	2.75
16	Arwal Nagar Parishad	8500	2.50
17	Jamui Nagar Parishad	8052	2.76
18	Sheikhpura Nagar Parishad	5443	2.15
19	Lakhisarai Nagar Parishad	6430	2.24
20	Sonpur Nagar Panchayat	2283	1.07
21	Ara Nagar Nigam	7697	4.89
22	Sasaram Nagar Parishad	8774	2.80
23	Makhdumpur Nagar Panchayat	6171	1.87
24	Bodhgaya Nagar Panchayat	4008	1.94
25	Bikramganj Nagar parishad	4237	1.42
26	Saharsa Nagar Parishad	7619	2.19
27	Biharsharif Nagar Nigam	7325	3.16
28	Samastipur Nagar Parishad	3253	1.53
29	Jamalpur Nagar Parishad	6551	2.25
30	Aurangabad Nagar Parishad	5061	1.86
31	Supaul Nagar Parishad	3554	1.24
32	Jhanjharpur Nagar Panchayat	1998	0.70
33	Madhubani Nagar Parishad	2669	1.24
34	Bhabua Nagar Parishad	7930	2.53
35	Motihari Nagar Parishad	5073	1.56

36	Chhapra Nagar Nigam	3670	1.67
37	Bagha Nagar Parishad	4938	1.39
38	Siwan Nagar Parishad	4620	1.94
39	Sherghati Nagar Panchayat	4008	1.26
40	Fathua Nagar Parishad	5254	1.43
41	Mohania Nagar Panchayat	4966	1.73
42	Barbigha Nagar Parishad	4666	1.36
43	Kishanganj Nagar Parishad	3976	1.24
44	Haweli Kharagpur Nagar Panchayat	3405	1.25
45	Warsaliganj Nagar Panchayat	3250	1.12
46	Sitamarhi Nagar Parishad	3636	1.36
47	Dakha Nagar Parishad SL BR	2549	0.77
48	Ramnagar Nagar Panchayat	3647	0.94
49	Benipur Nagar Parishad	4295	1.46
50	Naubatpur Nagar Panchayat	2430	0.91
51	Sultanganj Nagar Parishad	2815	1.27
52	Bahadurganj Nagar Panchayat	3501	1.24
53	Navinagarnagar panchayat	3497	1.02
54	Rajgir Nagar Panchayat	2745	1.21
55	Banka Nagar Parishad	3027	0.99
56	Barahiya Nagar Panchayat	2960	1.10
57	Jhajha Nagar Panchayat	2600	0.87
58	Hilsa Nagar Parishad	3510	1.07
59	Sheohar Nagar Panchayat	2119	0.85
60	Thakurganj Nagar Panchayat	1753	0.76
61	Dalsinghsarai Nagar Panchayat	1388	0.79
62	Chakiya Nagar Panchayat	1980	0.63
63	Islampur Nagar Panchayat	2480	0.87
64	Madhepura Nagar Parishad	3000	1.00
65	Kochas Nagar Panchayat	1769	0.50
66	Manihari Nagar Panchayat SL BR	1530	0.44
67	Piro Nagar Panchayat	2448	0.83
68	Tegra Nagar Parishad	2728	0.83
69	Motipur Nagar Panchayat	1822	0.56
70	Rosera Nagar Panchayat	1580	0.69
71	Nawada Nagar Parishad	3290	1.20
72	Barh Nagar Parishad	2500	0.79
73	Barauli Nagar Panchayat	2437	0.62
74	Janakpur Road Nagar Panchayat	1282	0.49
75	Nokha Nagar Panchayat	2745	0.77

76	Hisua Nagar Panchayat	2500	0.79
77	Nawgachia Nagar Panchayat	2395	0.71
78	Dumra Nagar Panchayat	1022	0.49
79	Belsand Nagar Panchayat	1722	0.65
80	Mahnar Nagar Parishad	2072	0.61
81	Mokama Nagar Parishad	1638	0.52
82	Koilwar Nagar Panchayat	966	0.42
83	Nasriganj Nagar Panchayat	1105	0.42
84	Silao Nagar Panchayat	1416	0.50
85	Tekari Nagar Panchayat	860	0.32
86	Bihiya Nagar Panchayat	1338	0.65
87	Rafiganj Nagar Panchayat	2200	0.76
88	Maner Nagar Panchayat	6369	0.56
89	Bairgania Nagar Panchayat	1479	0.58
90	Mirganj Nagar Panchayat	1603	0.44
91	Pakridayal Nagar Panchayat	2041	0.52
92	Barsoi Nagar Panchayat	1560	0.50
93	Kateya Nagar Panchayat	1715	0.41
94	Khagaria Nagar Parishad	2640	0.83
95	Vikram Nagar Panchayat	1462	0.51
96	Bihat Nagar Parishad	1345	0.47
97	Maharajganj Nagar Panchayat	1719	0.45
98	Chanpatiya Nagar Panchayat	1401	0.39
99	Bakhri Nagar Panchayat	1424	0.63
100	Jaynagar Nagar Panchayat	1110	0.47
101	Shahpur Nagar Panchayat	986	0.48
102	Koath Nagar Panchayat	1150	0.40
103	Gogri Jamalpur Nagar Panchayat	2796	0.58
104	Dumraon Nagar parishad	800	0.24
105	Kanti nagar panchayat	1080	0.36
106	Khagaul Nagar Panchayat	1392	0.36
107	Ekmabazar Nagar Panchayat	1847	0.43
108	Jagdishpur Nagar Panchayat	588	0.28
109	Areraj Nagar Panchayat	1730	0.45
110	Mahua Nagar Panchayat	731	0.20
111	Jogbani Nagar Panchayat	510	0.22
112	Khusurupur Nagar Panchayat	665	0.21
113	Kasba Nagar Panchayat	420	0.15
114	Ghoghardiha Nagar Panchayat	460	0.15
115	Lalganj Nagar Panchayat	2349	0.75
116	Daudnagar Nagar Parishad	2880	0.99
		544190	209.92

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GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.469
ANSWERED ON 25.07.2024

EXPANSION OF THERMAL POWER CAPACITY

469 SHRI DHAVAL LAXMANBHAI PATEL:
SMT. SMITA UDAY WAGH:
SMT. APARAJITA SARANGI:
DR. NISHIKANT DUBEY:

Will the Minister of POWER be pleased to state:

(a) whether the Government proposes for expansion of thermal power capacity in the country;

(b) if so, the details thereof and the total estimated cost for expansion of thermal power capacity;

(c) the steps taken to reduce dependency on coal-based power plants and to decrease emission levels in such thermal power plants; and

(d) the details of the percentage of electricity generated from various sources such as coal, gas, hydel and renewable energy since 2014?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b) : In order to meet the estimated electricity demand by the year 2031-32, generation planning studies have been carried out by Central Electricity Authority (CEA). As per the study results, it is envisaged that to meet the base load requirement of the country in 2032, the required coal & lignite based installed capacity would be 283 GW against the present installed capacity of 217.5 GW. Considering this, Government of India proposes to set up an additional minimum 80 GW coal based capacity by 2031-32.

The estimated capital cost for setting up of new coal based thermal capacity as considered in National Electricity Plan is Rs 8.34 Cr/ MW (at 2021-22 price level). Hence, the thermal capacity addition is expected to entail an expenditure of minimum Rs. 6,67,200 Crs by 2031-32.

.....2.

(c): (i) To reduce the dependency on coal based thermal power plants, Government of India has planned to augment non-fossil fuel based installed electricity generation capacity. India in its Intended Nationally Determined Contributions (INDCs) stands committed to achieve about 50 percent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030. At present India has already achieved 45.5% Installed Capacity from non-fossil fuel-based resources. To achieve this objective, following steps have been taken to promote Renewable Energy Generation in the country:

- **Permitting Foreign Direct Investment (FDI) up to 100 percent under the automatic route;**

- **Waiver of Inter State Transmission System (ISTS) charges for inter-state sale of solar and wind power for projects to be commissioned by 30th June 2025;**

- **Declaration of trajectory for Renewable Purchase Obligation (RPO) up to the year 2029-30;**

- **Setting up of Ultra Mega Renewable Energy Parks to provide land and transmission connectivity to Renewable Energy developers for installation of RE projects at large scale;**

- **Schemes such as Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM), Solar Rooftop Phase II, 12000 MW CPSU Scheme Phase II;**

- **Laying of new transmission lines and creating new sub-station capacity under the Green Energy Corridor Scheme for evacuation of renewable power;**

- **Notification of standards for deployment of solar photovoltaic system/devices.**

- **Setting up of Project Development Cell for attracting and facilitating investments;**

- **Standard Bidding Guidelines for tariff based competitive bidding process for procurement of Power from Grid Connected Solar PV and Wind Projects;**

.....3.

- **Government has issued orders that power shall be dispatched against Letter of Credit (LC) or advance payment to ensure timely payment by distribution licensees to RE generators;**

- **Notification of Promoting Renewable Energy through Green Energy Open Access Rules 2022;**

- **Launch of Green Term Ahead Market (GTAM) to facilitate sale of Renewable Power through exchanges;**

- **National Green Hydrogen Mission launched with an aim to make India a global hub for production, utilization and export of Green Hydrogen and its derivatives; and,**

- **Notification of prescribed trajectory for RE power bids to be issued by Renewable Energy Implementation Agencies from FY 2023-24 to FY 2027-28 with an annual target of 50 GW of RE bids.**

(ii) Further, for reduction of emission levels of thermal power plants, following measures have been taken by the Government:

- **MoEF&CC vide notification dated 07.12.2015 and its subsequent amendments has notified norms in respect of reducing stack emissions such as Suspended Particulate Matter (SPM), SOx & NOx from coal based Thermal Power Plants. To meet these standards, Thermal Power Plants are using techniques like Electro Static Precipitator (ESP), Flue Gas Desulphurization (FGD), NOx Combustion Modification etc.**

- **Promotion of installation of efficient Supercritical /Ultra Supercritical units over Subcritical Thermal Units.**

- **Ministry of Power has issued a policy on utilization of Biomass for Power generation through co-firing in coal based power plants. The policy mandates 5-7% co-firing of Biomass primarily of agro residue with coal, after assessing the technical feasibility.**

(d) : The details of the percentage of electricity generated from various sources such as coal, gas, hydel and renewable energy since 2014 is attached as Annexure.

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PART (d) OF UNSTARRED QUESTION NO. 469 ANSWERED IN THE LOK SABHA ON 25.07.2024

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Percentage of Electricity Generated From Various Sources

Year-Wise Generation from 2014-15 to 2024-25 (Up to May, 2024)												
Source Name			2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25 (upto May)
			% of Total Gen	% of Total Gen	% of Total Gen	% of Total Gen	% of Total Gen	% of Total Gen	% of Total Gen	% of Total Gen	% of Total Gen	% of Total Gen	% of Total Gen
Conventional	Thermal	Coal	72.08	73.45	73.30	72.76	71.77	69.20	68.82	69.81	70.54	72.50	73.29
		Lignite	3.20	2.92	2.80	2.66	2.51	2.37	2.21	2.49	2.23	1.95	1.94
		Diesel	0.13	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.03
		Naptha	0.09	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
		Natural gas	3.61	4.00	3.95	3.83	3.62	3.49	3.68	2.41	1.47	1.80	2.75
	Sub Total		79.10	80.42	80.07	79.28	77.92	75.07	74.72	74.72	74.25	76.28	78.00
	Nuclear		3.25	3.19	3.05	2.93	2.75	3.35	3.11	3.16	2.82	2.76	2.76
	Hydro		11.64	10.34	9.86	9.64	9.80	11.21	10.88	10.16	9.98	7.71	6.42
	Bhutan Import		0.45	0.45	0.45	0.37	0.32	0.42	0.63	0.50	0.42	0.27	0.06
Conventional Total			94.44	94.39	93.43	92.21	90.79	90.04	89.34	88.54	87.47	87.01	87.24
Renewable Energy	Wind		3.04	2.81	3.70	4.03	4.51	4.65	4.35	4.60	4.42	4.79	4.03
	Solar		0.42	0.63	1.09	1.98	2.85	3.61	4.37	4.93	6.28	6.67	7.65
	Biomass		0.28	0.32	0.34	0.26	0.20	0.21	0.25	0.23	0.19	0.20	0.18
	Bagasse		1.06	1.10	0.80	0.91	0.99	0.78	0.82	0.84	0.79	0.62	0.34
	Small Hydro		0.72	0.71	0.62	0.59	0.63	0.68	0.74	0.70	0.69	0.55	0.41
	Others		0.03	0.02	0.02	0.03	0.03	0.03	0.12	0.15	0.16	0.16	0.15
Renewable Energy Total			5.56	5.61	6.57	7.79	9.21	9.96	10.66	11.46	12.53	12.99	12.76
Grand Total			100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.508
ANSWERED ON 25.07.2024

REVISED DISTRIBUTION SECTOR SCHEME IN RAJASTHAN

†508 SHRI HANUMAN BENIWAL:

Will the Minister of POWER be pleased to state:

a) whether the Government has issued directions regarding electrification under the Revised Distribution Sector Scheme (RDSS) of the housing units and hamlets identified but left out in Rajasthan and other States at the time of approval of Saubhagya Yojana;

(b) if so, the number of housing units/hamlets proposed to be electrified in Nagaur, Didwana-Kuchaman and other districts under the said scheme along with budgetary allocation made by Government in this regard;

(c) the targets set for completion of electrification work under the said scheme in Nagaur and Didwana-Kuchaman districts of Rajasthan; and

(d) the details of physical progress of this project at present?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : The Central Government is supporting States for electrification of households which were missed out under SAUBHAGYA, under the ongoing scheme of Revamped Distribution Sector Scheme (RDSS). Till date, Works amounting to Rs 2,937 Cr have been sanctioned for electrification of 6,84,112 left out households for the States of Rajasthan, Uttar Pradesh, Andhra Pradesh, Meghalaya, Mizoram, Nagaland, Jharkhand, Jammu & Kashmir, Bihar and Assam.

.....2.

In addition, all identified PVTG Households under the PM-JANMAN (Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan) are eligible for funding under RDSS for on-grid electricity connection as per the scheme guidelines. Till date Works amounting to Rs 488 Cr have been sanctioned for 1,23,530 PVTG households.

(b) : Under RDSS, Rs. 459.18 Cr (with Government Budgetary Support of Rs.275.51 Cr) has been sanctioned for electrification of 1,90,959 left out households for the State of Rajasthan. The district-wise number of households to be electrified in Rajasthan under RDSS is placed at Annexure-I.

In addition, Rs. 40.34 Cr has been sanctioned for electrification of 17,633 PVTG households for the district of Baran in Rajasthan.

(c) & (d) : The sunset date for the RDSS is 31.03.2026 and sanctioned works are to be completed before the scheme closure. The physical progress of the sanctioned electrification works for the State of Rajasthan is placed at Annexure-II.

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ANNEXURE-I

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 508 ANSWERED IN THE LOK SABHA ON 25.07.2024

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Sl. No	Districts	Number of Households sanctioned	Sanctioned Cost (Rs. Cr.)
1	Banswara	14,990	25.30
2	Dungarpur	4,189	7.07
3	Nagaur & Didwana-kuchaman	15,615	25.57
4	Pratapgarh	890	1.50
5	Rajsamand	9,501	10.75
6	Sikar	77	0.12
7	Udaipur	34,590	58.37
8	Banwer	41,396	112.92
9	Bikaner	14,458	46.79
10	Churu	6,379	21.24
11	Hanumangarh	2,057	3.24
12	Jaisalmer	12,801	42.83
13	Jalore	5,221	14.75
14	Jodhpur	20,993	66.94
15	Pali	1,223	3.73
16	Sriganganagar	1,598	4.72
17	Sirohi	4,981	13.33
	Total	1,90,959	459.18

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ANNEXURE-II

ANNEXURE REFERRED IN REPLY TO PARTS (c) & (d) OF UNSTARRED QUESTION NO. 508 ANSWERED IN THE LOK SABHA ON 25.07.2024

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Sl. No.	District	Physical Progress till 22.07.2024 (Number of households electrified)
1	Banswara	9,068
2	Dungarpur	4,189
3	Pratapgarh	705
4	Rajsamand	9,501
5	Udaipur	15,268
6	Salumbar	4,848
7	Sikar	41
8	Naguar	3,875
9	Didwana-kuchaman	3,376
1	Banwer	2,839
2	Bikaner	1,823
3	Churu	961
4	Hanumangarh	444
5	Jaisalmer	882
6	Jalore	725
7	Jodhpur	2,388
8	Pali	256
9	Sriganganagar	364
10	Sirohi	756
Total		62,309

PVTG household details

S.No	District	Physical Progress till 22.07.2024 (Number of households electrified)
1	Baran	6,930

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GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.521
ANSWERED ON 25.07.2024

VARYING ELECTRICITY BILL IN STATES

521 SHRI K E PRAKASH:

Will the Minister of POWER be pleased to state:

(a) whether the Ministry of Power has any proposal for implementing same electricity bill across the country;

(b) if so, the initiatives taken in this regard and the reasons for its implementation; and

(c) if not, the initiatives taken/being taken for varying electricity bill from State to State which would affect industry and trade?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) to (c) : As per the provisions of the Electricity Act, 2003, the State Electricity Regulatory Commission determines the electricity tariff for retail sale of electricity to end consumers. Section 61 of the Electricity Act, 2003 and the Tariff Policy provide the guiding principles for determination of tariff.

At present there is no proposal to implement uniform electricity pricing throughout the country. However, Government is promoting competition through Power Exchanges. Uniform tariff is discovered on the Power Exchange for a specific time block of the day. Accordingly, to this extent, for the power procured by the distribution utilities from Power Exchanges the price of electricity remains uniform, except in case of market splitting.

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GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.525
ANSWERED ON 25.07.2024

POWER SUPPLY IN RURAL AREAS

525 SMT. POONAMBEN HEMATBHAI MAADAM:

Will the Minister of POWER be pleased to state:

(a) whether the Government has made any effort to improve the availability of power across the country;

(b) if so, the details thereof;

(c) the details of the number of villages which have been connected with electricity to improve power supply in rural areas;

(d) whether power supply has improved in the State of Gujarat; and

(e) if so, the details thereof and the measures being implemented in this regard?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b) : There is adequate availability of power in the country. We have addressed the critical issue of power deficiency by adding 214237 MW of generation capacity in the last ten years transforming our country from power deficit to power sufficient. We have increased the generation capacity by 79.5% from 248554 MW in March 2014 to 446190 MW in June 2024.

We have added 195181ckt kilometre of transmission lines since April 2014 connecting the whole country into one grid running on one frequency. This has enabled us to transfer 118740 MW from one corner of the country to another. We strengthened the distribution system by implementing projects of 1.85 lac crores under DDUGJY/IPDS/SAUBHAGYA. Under the above distribution sector schemes, 2927 new sub-stations have been added, upgradation of 3965

.....2.

existing sub-stations has been carried out, 6,92,200 Distribution Transformers have been installed, Feeder separation of 1,13,938 Circuit Kilometer (Km) has been done and 8.5 Lakh Circuit Kilometer (CKm) of HT and LT lines have been added/upgraded across the States. As a result of these measures, the availability of power supply in rural areas has increased from 12.5 Hours in 2015 to 21.9 Hours in 2024. The power supply in urban areas has increased to 23.4 Hours in 2024. The gap between Energy Requirement and Energy Supplied has come down from 4.2% in 2013-14 to 0.1% in FY 2024-25 (till June, 2024). Even this gap between Energy Requirement and Energy Supplied is generally on account of constraints in the State transmission/distribution network and financial constraints of DISCOMs etc

The details of power supply position in the country in terms of Energy for the last ten years and the current year till June-2024 is given at Annexure-I.

(c) : Government of India electrified all the un-electrified villages and strengthened the sub-transmission and distribution network in rural areas under the Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY). Under the scheme, total 18,374 villages were electrified. Further, all willing unelectrified households were electrified under the SAUBHAGYA Scheme. A total of 2.86 crore households have been electrified under the SAUBHAGYA Scheme. Both the scheme stand closed as on March 2022.

Further, Government of India is supporting States under the ongoing Scheme of Revamped Distribution Sector Scheme (RDSS) for electrification of left-out households. In addition, all identified PVTG (Particularly Vulnerable Tribal Groups) Households under PM-JANMAN for on-grid electricity connection are also being sanctioned for funding under RDSS as per the scheme guidelines.

Under RDSS, the electrification of 6.84 lakh unelectrified Households have been sanctioned. Further, under PM-JANMAN, On-grid electrification of a total of 1.24 lakh Households in 10,710 Habitations have also been sanctioned.

(d) & (e) : The details of power supply position in the State of Gujarat in terms of Energy for the last two years and the current year till June, 2024 is given at Annexure-II. The Energy Supplied in the State of Gujarat has been commensurate to the Energy Requirement with only a marginal gap of 44 MU and 28 MU during the years 2022-23 and 2023-24 respectively. The power supply in rural areas of Gujarat has improved from 23.12 hours in 2019-20 to 23.75 hours in 2023-24. At present, the power supply in urban areas of Gujarat is 23.95 hours.

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Under RDSS (Revamped Distribution Sector Scheme), infrastructure works amounting to Rs. 6,089 crore has been sanctioned which majorly includes new HT & LT lines, re-conductoring of old/ damaged lines, feeder bifurcation of overloaded feeders, feeder segregation, new/ augmentation of DTs, creation of Resilient Distribution Infrastructure etc.

Further, Electricity being a concurrent subject, supply and distribution of electricity to the consumers in a State/UT is within the purview of the respective State Government/Power Utility. Adequate quantum of power is available in the country. Making arrangement of appropriate quantum of power from various sources to meet the demand of various type of electricity consumers in any State/UT is in the purview of the concerned State Government/Power Utilities. The Central Government only supplements the efforts of the State Governments by establishing power plants in Central Sector through Central Public Sector Undertakings (CPSUs) and allocating power from them to the various States/ UTs including the State of Gujarat.

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ANNEXURE-I

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 525 ANSWERED IN THE LOK SABHA ON 25.07.2024

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Years	Energy [in Million Units (MU)]			
	Energy Requirement	Energy Supplied	Energy not Supplied	
	(MU)	(MU)	(MU)	(%)
2014-15	10,68,923	10,30,785	38,138	3.6
2015-16	11,14,408	10,90,850	23,558	2.1
2016-17	11,42,928	11,35,332	7,596	0.7
2017-18	12,13,326	12,04,697	8,629	0.7
2018-19	12,74,595	12,67,526	7,070	0.6
2019-20	12,91,010	12,84,444	6,566	0.5
2020-21	12,75,534	12,70,663	4,871	0.4
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 June, 2024)*	4,51,746	4,51,172	574	0.1

***Figures for June, 2024 are provisional**

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ANNEXURE-II

ANNEXURE REFERRED IN REPLY TO PARTS (d) & (e) OF UNSTARRED QUESTION NO. 525 ANSWERED IN THE LOK SABHA ON 25.07.2024

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Years	Energy [in Million Units (MU)]			
	Energy Requirement	Energy Supplied	Energy not Supplied	
	(MU)	(MU)	(MU)	(%)
2022-23	139,043	138,999	44	0.0
2023-24	145,768	145,740	28	0.0
2024-25 (upto June, 2024)*	42,404	42,404	0	0.0

*Figures for June, 2024 are provisional.

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GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.528
ANSWERED ON 25.07.2024

POWER DEMAND IN INDIA

528 SHRI PRADYUT BORDOLOI:
SHRI ANTO ANTONY:
SHRI K SUDHAKARAN:
MS. S JOTHIMANI:

Will the Minister of POWER be pleased to state:

(a) the total power generation capacity in the country since 2015, year-wise;

(b) the steps taken/being taken by the Union Government to increase production capacity since 2014;

(c) whether the cost per unit of power generation has raised due to the import of coal during the past few years and if so, the details thereof; and

(d) the steps taken by the Government to reduce the production cost per unit of power generated?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : The year wise details of total power generation capacity from 2013-14 to 2024-25 (upto June, 2024) are given at Annexure.

(b) : We have taken following steps to increase the production capacity between 2014-15 to 2023-24 in the country: -

(i) The installed capacity which was 2,48,554 MW in March 2014 has been increased to 4,46,190 MW in June 2024. Installed capacity of Coal based power has increased from 1,39,663 MW in March 2014 to 2,10,969 MW in June 2024. Installed capacity of Renewable sector has increased from 75,519 MW in March 2014 to 1,95,013 MW in June 2024.

(ii) 1,95,181 circuit kilometer (ckm) of transmission lines, 7,30,794 MVA of Transformation capacity and 82,790 MW of Inter-Regional capacity has been added connecting the whole country into one grid running on one frequency with the capability of transferring 1,18,740 MW from one corner of the country

.....2.

to another. India's grid has emerged as one of the largest unified grids in the world. Connecting the whole country into one grid has transformed the country into one unified power market. Distribution Companies can buy power at cheapest available rates from any generator in any corner of the country thereby enabling cheaper electricity tariffs for consumers.

(iii) 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 addition.

(iv) Government have constructed Green Energy Corridors and put in place 13 Renewable Energy Management Centres.

(v) We have made efforts to make Power Sector viable. The AT&C losses have come down from 22.62% in 2013-14 to 15.40% in 2022-23. All current payment of Gencos are up-to-date and the legacy dues of Gencos have come down from Rs. 1,39,947 crore to Rs. 35,119 Crore. The subsidy payment to DISCOMS on account of subsidies announced by State Government are up-to-date.

(vi) Further, the Government of India has implemented Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) and Integrated Power Development (IPDS) schemes to achieve the objective of providing uninterrupted power supply by strengthening the sub-transmission and distribution network. The Government of India has also implemented the Pradhan Mantri Sahaj Bijli Har Ghar Yojana- (SAUBHAGYA) with the objective to achieve universal household electrification for providing electricity connection to all willing un-electrified household in rural area and all willing poor household in urban areas in the country. Under these schemes, 18,374 villages have been electrified and 2.86 crore household were provided electricity connections. As a result, 100% villages have been electrified. Besides this, 2927 new substations have been added, upgradation of 3965 existing sub stations has been carried out and 8.5 Lac circuit kms of HT and LT lines have been added/upgraded. As a result of these measures, the availability of power in rural areas has increased from 12.5 hours in 2015 to 21.9 hours in 2024. The availability of power in urban areas is 23.4 hours.

(vii) Waiver of ISTS charges on transmission of electricity generated from Solar, Wind, Pumped Storage Plants and Battery Energy Storage Systems.

(viii) Renewable Purchase Obligations (RPOs) and Energy Storage obligations Trajectory till 2029-30.

(ix) In 2019, Government announced measures to promote Hydro Power Sector such as Declaring Large Hydro Projects (>25 MW) as Renewable Energy source, Tariff rationalization measures for bringing down hydropower tariff, Budgetary Support for Flood Moderation/ Storage Hydro Electric Projects (HEPs), Budgetary Support to Cost of Enabling Infrastructure i.e., roads/bridges, etc.

.....3.

(x) Introduction of Real Time Market (RTM), Green Day Ahead Market (GDAM), Green Term Ahead Market (GTAM), High Price Day Ahead Market (HP-DAM) in Power Exchanges. Also, DEEP Portal (Discovery of Efficient Electricity Price) for e-Bidding and e-Reverse for procurement of short-term power by DISCOMs was introduced.

(xi) Setting up of Ultra Mega Renewable Energy Parks to provide land and transmission to RE developers for installation of RE projects at large scale.

(xii) SHAKTI policy for transparent allocation of coal to Thermal Power plant was introduced, which enabled efficient domestic coal allocation to Thermal power plants and also ensured revival of various stressed Thermal Power projects.

(xiii) Construction of the Inter-State transmission system ahead of the generation capacity.

(c): The cost of generation of electricity from coal based power plant is dependent upon the price of coal and cost of freights and in case of blending also the price of the blended imported coal. The price of imported coal is linked with International Indices, source of origin and factors like ocean freight, insurance etc. which vary with international demand supply scenario. Further, every generating company consumes imported coal as per its requirement.

Average Power purchase cost has increased by 71 Paisa only between FY 22 and FY 23. This is because of increase in various costs – including increase in Transmission and Distribution cost.

(d) : Government of India have taken various steps to reduce the cost of power generation and resultant reduction in cost of electricity to consumers as given below:

(i) Power Exchanges have been set up in the country with the objective to ensure fair, neutral, efficient and robust electricity price discovery. Distribution Companies (DISCOMs) can procure the power from these Power Exchanges and thus help to reduce power purchase cost of DISCOMs.

(ii) The Government in May, 2016 allowed flexibility in utilization of domestic coal by State/Central Generation Companies (GENCOs) amongst their generating stations to reduce the cost of power generation by allocating more coal to their most efficient plants as well as by saving in transportation cost. The States may also transfer their linkage coal to IPPs selected through bidding process and take equivalent power.

.....4.

(iii) Rationalization of linkage sources of State/Central Generating Companies (GENCOs) and Independent Power Producers (IPPs) with a view to optimize transportation cost has been allowed.

(iv) To promote competitive procurement of electricity by distribution licensees, the Government issued various guidelines for tariff based bidding process for procurement of electricity under Section 63 of Electricity Act, 2003.

(v) The Government has introduced the SHAKTI (Scheme for Harnessing and Allocating Koyala (Coal) Transparently in India)-2017 Scheme to provide coal linkages to the power plants which do not have linkage, thus helping the generators to get cheaper coal and thereby reduction in cost of generation.

(vi) The Government of India has also launched the Revamped Distribution Sector Scheme (RDSS) to help DISCOMs improve their operational efficiencies and financial sustainability by providing result-linked financial assistance to DISCOMs to strengthen supply infrastructure. The main objectives of RDSS are reduction of Aggregate Technical & Commercial (AT&C) losses to pan-India levels of 12-15% by 2024-25 and reduction of average cost of supply per unit of power minus average revenue realized (ACS-ARR) gap to zero by 2024-25. Reduction in AT&C losses improves the finances of the utilities, which will enable them to better maintain the system and buy power as per requirements; benefitting the consumers.

(vii) With the objective of lowering the cost of electricity to consumers, National Merit Order Dispatch was made operational since April 2019, for Inter State Generating Stations under which electricity from more efficient/lower cost plant are dispatched first, which optimises the total variable cost of generation pan-India, while meeting technical and grid security constraints. It has resulted in reduction of variable cost on pan-India basis and these benefits are being shared with generators and their beneficiaries ultimately reducing the cost of electricity to consumers.

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 528 ANSWERED IN THE LOK SABHA ON 25.07.2024

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The year wise details of total power generation capacity from 2013-14 to 2024-25 (upto June, 2024)

Year	Installed Capacity (in MW)
2013-14	248554
2014-15	275895
2015-16	306330
2016-17	328146
2017-18	345631
2018-19	357871
2019-20	371334
2020-21	383521
2021-22	399497
2022-23	416059
2023-24	441970
2024-25 (up to June 24)	446190

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GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.555
ANSWERED ON 25.07.2024

POWER GENERATION

555 PROF. SOUGATA RAY:

Will the Minister of POWER be pleased to state:

(a) the details of power generation from Hydro, Thermal and other sources and its quantity per year;

(b) the details of the demand of power, State-wise;

(c) whether the State Governments had inter-state agreements for power distribution and sharing;

(d) if so, the details thereof;

(e) whether the Government has noticed tariff differences among various States; and

(f) if so, the steps taken/being taken to have uniform power tariff in the country?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : The details of power generation from Hydro, Thermal and other sources and its quantity per year for the last three years and the current year 2024-25 (upto June, 2024) are given at Annexure-I.

(b) : The details of State-wise/UT-wise Power Supply Position in the country during the year 2023-24 and current year 2024-25 (April, 2024 to June, 2024) are given at Annexure- II.

.....2.

(c) & (d) : As per the information received from Regional Power Committees (RPCs), there are complementary power banking arrangements between some States for power distribution and sharing as per the details given at Annexure-III. The quantum of power and period of sharing varies depending upon the surplus power available with the States and their requirements.

In addition, States have also been utilizing 'Portal for Utilization of Surplus Power- PUShP Portal' for temporary reallocation/transfer of surplus power in one State to others in need. As on 22.07.2024, Twenty (20) numbers of States & UTs across all the regions have started using the portal and total 94 numbers of transactions have been successfully completed.

(e) : Tariff Policy provides the guiding principles for determination of tariff. The tariff to be levied by the distribution licensees to its consumers is as approved by the Appropriate Commission for that particular category of consumer. The State Government may also give subsidies to consumer categories. Therefore, there is no uniformity in tariff between different states.

(f) : At present there is no proposal to implement uniform electricity pricing throughout the country. However, Government is promoting competition through Power Exchanges. Uniform tariff is discovered on the Power Exchange for a specific time block of the day. Accordingly, to this extent, for the power procured by the distribution utilities from Power Exchanges the price of electricity remains uniform.

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ANNEXURE-I

ANNEXURE REFERRED IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 555 ANSWERED IN THE LOK SABHA ON 25.07.2024

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The details of power generation from Hydro, Thermal and other sources and its quantity per year for the last three years and the current year 2024-25 (upto June,2024)

(All figures are in Million Units)

Fuel		2021-22	2022-23	2023-24	2024-25 (Upto June)
THERMAL	COAL	1,041,487.43	1,145,907.58	1,260,902.62	349,631.40
	DIESEL	117.24	229.71	400.58	116.46
	HIGH SPEED DIESEL	0	0	0	0.00
	LIGNITE	37,094.04	36,188.34	33,949.79	9,050.70
	MULTI FUEL				
	NAPTHA	0	0.83	0.03	0.00
	NATURAL GAS	36,015.77	23,884.21	31,295.91	13,487.93
THERMAL Total		1,114,714.48	1,206,210.67	1,326,548.93	372,286.49
NUCLEAR		47,112.06	45,861.09	47,937.41	13,069.59
HYDRO		151,627.33	162,098.77	134,053.92	34,453.12
Bhutan Import		7,493.2	6,742.4	4,716.1	772.91
TOTAL [Conventional]		1,320,947.07	1,420,912.93	1,513,256.36	420,582.11
Wind		68,640.07	71,814.16	83,385.35	23,053.75
Solar		73,483.94	1,02,014.24	1,15,975.11	35,444.53
Biomass		3,482.70	3,161.32	3,417.19	4,920.22
Bagasse		12,573.88	12,863.16	10,825.59	
Small Hydro		10,463.55	11,170.62	9,485.04	
Others		2,268.17	2,529.18	2,746.55	
TOTAL [Renewable excluding conventional Hydro]		170,912.30	203,552.68	225,834.83	63,418.50
GRAND TOTAL		1,491,859.37	1,624,465.61	1,739,091.19	484,000.61

Note: Gross generation figures of conventional power plants is for plants of capacity 25 MW and above only.

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ANNEXURE-II

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 555 ANSWERED IN THE LOK SABHA ON 25.07.2024

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The details of State-wise/UT-wise Power Supply Position in the country during the year 2023-24 and current year 2024-25 (April, 2024 to June, 2024)

(Figures in MU net)

State/ System / Region	April, 2023 - March, 2024				April, 2024 - June, 2024			
	Energy Requirement	Energy Supplied	Energy not Supplied		Energy Requirement	Energy Supplied	Energy not Supplied	
	(MU)	(MU)	(MU)	(%)	(MU)	(MU)	(MU)	(%)
Chandigarh	1,789	1,789	0	0.0	578	578	0	0.0
Delhi	35,501	35,496	5	0.0	11,614	11,606	8	0.1
Haryana	63,983	63,636	348	0.5	19,332	19,321	11	0.1
Himachal Pradesh	12,805	12,767	38	0.3	3,252	3,237	15	0.5
Jammu & Kashmir	20,040	19,763	277	1.4	4,815	4,791	25	0.5
Punjab	69,533	69,528	5	0.0	20,515	20,515	0	0.0
Rajasthan	107,422	106,806	616	0.6	28,946	28,744	202	0.7
Uttar Pradesh	148,791	148,287	504	0.3	48,846	48,765	80	0.2
Uttarakhand	15,644	15,532	112	0.7	4,682	4,668	14	0.3
Northern Region	476,852	474,946	1,906	0.4	142,980	142,626	354	0.2
Chhattisgarh	39,930	39,872	58	0.1	11,106	11,104	2	0.0
Gujarat	145,768	145,740	28	0.0	42,404	42,404	0	0.0
Madhya Pradesh	99,301	99,150	151	0.2	25,240	25,217	23	0.1
Maharashtra	207,108	206,931	176	0.1	53,338	53,334	5	0.0
Dadra & Nagar Haveli and Daman & Diu	10,164	10,164	0	0.0	2,696	2,696	0	0.0
Goa	5,111	5,111	0	0.0	1,437	1,431	6	0.4
Western Region	517,714	517,301	413	0.1	138,588	138,552	36	0.0
Andhra Pradesh	80,209	80,151	57	0.1	20,501	20,501	0	0.0
Telangana	84,623	84,613	9	0.0	19,411	19,411	0	0.0
Karnataka	94,088	93,934	154	0.2	23,704	23,704	0	0.0
Kerala	30,943	30,938	5	0.0	8,529	8,527	2	0.0
Tamil Nadu	126,163	126,151	12	0.0	35,385	35,385	0	0.0
Puducherry	3,456	3,455	1	0.0	970	970	0	0.0
Lakshadweep	64	64	0	0.0	18	18	0	0.0
Southern Region	419,531	419,293	238	0.1	108,513	108,511	2	0.0
Bihar	41,514	40,918	596	1.4	12,601	12,514	87	0.7

DVC	26,560	26,552	8	0.0	6,762	6,761	1	0.0
Jharkhand	14,408	13,858	550	3.8	4,140	4,089	52	1.3
Odisha	41,358	41,333	25	0.1	11,996	11,991	5	0.0
West Bengal	67,576	67,490	86	0.1	20,806	20,775	31	0.2
Sikkim	544	543	0	0.0	137	137	0	0.0
Andaman-Nicobar	386	374	12	3.2	114	112	3	2.5513
Eastern Region	192,013	190,747	1,266	0.7	56,456	56,279	177	0.3
Arunachal Pradesh	1,014	1,014	0	0.0	245	245	0	0.0
Assam	12,445	12,341	104	0.8	3,314	3,309	5	0.1
Manipur	1,023	1,008	15	1.5	264	264	0	0.0
Meghalaya	2,236	2,066	170	7.6	491	491	0	0.0
Mizoram	684	684	0	0.0	166	166	0	0.0
Nagaland	921	921	0	0.0	233	233	0	0.0
Tripura	1,691	1,691	0	0.0	494	494	0	0.0
North-Eastern Region	20,022	19,733	289	1.4	5,208	5,204	5	0.1
All India	1,626,132	1,622,020	4,112	0.3	451,746	451,172	574	0.1

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ANNEXURE-III

ANNEXURE REFERRED IN REPLY TO PARTS (c) & (d) OF UNSTARRED QUESTION NO. 555 ANSWERED IN THE LOK SABHA ON 25.07.2024

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The details of complementary power banking arrangements between the States for power distribution and sharing since January, 2023.

Sl. No.	From State	To State
1	Andhra Pradesh	Punjab
2	Goa	Punjab
		Delhi
		Rajasthan
3	Gujarat	Haryana
		Uttar Pradesh
4	Himachal Pradesh	Delhi
		Haryana
		Uttar Pradesh
		Meghalaya
		Andhra Pradesh
		Punjab
5	Karnataka	Uttar Pradesh
		Punjab
6	Kerala	Delhi
		Madhya Pradesh
		Punjab
		Uttar Pradesh
7	Madhya Pradesh	Andhra Pradesh
		Uttar Pradesh
		Odisha
		Punjab
		Telangana
		West Bengal
		Chhattisgarh
		Tamil Nadu
8	Maharashtra	Punjab
		Delhi
		Uttarakhand
9	Odisha	Madhya Pradesh
		Manipur

10	Punjab	Maharashtra
		Karnataka
		Madhya Pradesh
		Tamil Nadu
		Andhra Pradesh
		Kerala
		Himachal Pradesh
		Sikkim
		Manipur
		Arunachal Pradesh
		Goa
		Chhattisgarh
11	Rajasthan	Uttar Pradesh
		Chhattisgarh
		Tamil Nadu
		Delhi
		Goa
12	Telangana	Madhya Pradesh
		Punjab
		Uttar Pradesh
13	Uttarakhand	Delhi
		Himachal Pradesh
		Uttar Pradesh

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GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.589
ANSWERED ON 25.07.2024

DISTRIBUTION OF LOW POWER CONSUMING FANS AND ELECTRIC STOVES

589 SHRI KHAGEN MURMU:

Will the Minister of POWER be pleased to state:

(a) whether the Government proposes to launch any scheme for distribution of low power consuming fans and electric stoves in the country;

(b) if so, the details of such companies that distribute fans and electric stoves under this scheme, State/UT-wise; and

(c) the details of the cooking cost of poor families reduced through e-cooking?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b) : Presently, there is no proposal to launch any scheme for distribution of low power consuming fans and electric stoves in the country. However, Energy Efficiency Services Limited (EESL), a joint venture of CPSUs, offers these products through various channels. EESL leverages bulk procurement through transparent bidding to acquire energy-efficient equipment, including fans and induction cooktops, at competitive prices. Under the Business-to-Business route, EESL supplies these products through bulk sale agreements with states, utilities and other organisations. Under the Business-to-Consumer route, consumers can purchase fans and induction cooktops through EESL's e-commerce portal. To date, EESL has successfully deployed 23.59 lakh energy efficient fans and 2000 induction cook stoves in the country.

(c) : While e-cooking offers potential for significant cost savings compared to traditional LPG cooking, the amount varies depending on several key factors including cooking habits, electricity tariff and LPG cylinder prices.

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GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.635
ANSWERED ON 25.07.2024

STATUS OF ELECTRIFICATION PROJECTS IN TRIBAL AREAS

635 SHRI APPALANAIDU KALISETTI:

Will the Minister of POWER
be pleased to state:

(a) the current status of electrification projects in tribal habitations of Vizianagaram district under the Saubhagya Scheme and the details of the ongoing projects, completed and proposed thereof;

(b) the quantum of funds allocated, disbursed and utilised under the said scheme, specifically designated for electrification projects in tribal areas of Vizianagaram district during the last five years and the current year;

(c) whether any challenges/delays faced in the implementation of electrification projects in tribal areas of Vizianagaram district under the said scheme during the said period; and

(d) if so, the reasons therefor?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) to (d) : Under Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya), no project was sanctioned for the Vizianagaram District of Andhra Pradesh.

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GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.656
ANSWERED ON 25.07.2024

DDUGJY

656 SHRI K E PRAKASH:

Will the Minister of POWER be pleased to state:

(a) whether any specific measures are being taken by the Government under the Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) to enhance rural electrification in Tamil Nadu;

(b) if so, the details of these measures, and the reasons for their adoption; and

(c) the details of the necessary steps taken by the Government to address any challenges in implementation of the yojana?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) to (c): Govt. of India launched Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) in December 2014 for the rural areas with the following components:

(i) Segregation of agriculture feeders with the objective of providing day time power supply to farmers;

(ii) Strengthening and augmentation of distribution infrastructure in the rural areas, including metering of feeders, distribution transformers and consumers;

(iii) Village and household electrification works.

In line with the components mentioned above, projects had been sanctioned for the state of Tamil Nadu under DDUGJY and implementation of the same had commenced in September 2016. All physical works were completed by 31.12.2020 and the scheme stands closed now. The details of work sanctioned and executed for the State of Tamil Nadu, under DDUGJY are placed at Annexure.

.....2.

For smooth implementation of the works under DDUGJY, institutional mechanism was established as detailed below:

(i) At State level, a Committee under the Chairmanship of Chief Secretary to monitor the progress of works.

(ii) At Central level, inter-ministerial Monitoring Committee headed by the Secretary (Power), Government of India, to formulate the guidelines and to monitor the progress of the scheme.

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PARTS (a) TO (c) OF UNSTARRED QUESTION NO. 656 ANSWERED IN THE LOK SABHA ON 25.07.2024

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The details of work sanctioned and executed in Tamil Nadu, under DDUGJY are as follows:

Sl. No.	Milestone name	Unit	Target	Achievement
1	33/11 KV New Substations	Nos.	108	106
2	Augmentation of 33/11 KV SS	Nos.	119	128
3	Erection of upstream and downstream lines for the above SS			
	(i) 33 KV Lines	Km	1,478	1,514
	(ii) 11 KV Line	Km	1,513	1,345
4	Feeder Segregation	Nos.	29	29
	Erection of 11 KV line	Km	713	669
	Erection of LT line	Km	261	242
	Erection of DTs	Nos.	974	895
5	Energy Meter – Consumer	Nos.	11,93,990	11,95,856
	Single phase meters	Nos.	10,16,794	10,44,121
	Three phase meters	Nos.	1,77,196	1,51,735
6	Connection to Households			
	(i) BPL Households	Nos.	897	897
	(ii) APL Households	Nos.	6,171	6,679
	(iii) DTs	Nos.	283	294
	(iv) 11 KV line	Km	284	201
	(v) Erection of LT line	Km	931	966

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GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.680
ANSWERED ON 25.07.2024

PARTICIPATION OF PRIVATE SECTOR IN POWER GENERATION SECTOR

680 SHRI ARVIND GANPAT SAWANT:
SHRI OMPRAKASH BHUPALSINH
ALIAS PAVAN RAJENIMBALKAR:
SHRI SHRIRANG APPA CHANDU BARNE:

Will the Minister of POWER
be pleased to state:

(a) whether the private sector power generators and foreign investors are not yet ready to enter the power generation sector in a major way;

(b) if so, the details in this regard alongwith the reasons therefor;

(c) whether non-participation of the private sector generators and foreign investors has placed the responsibility largely on the public sector which is under financial pressure;

(d) if so, the response of the Government on the non-participation of the private sector generators and foreign investors in power generation sector; and

(e) the steps/action taken by the Government to address the issues relating to participation of the private sector generators and foreign investors in power generation sector?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) to (d): No. Private sector is playing an important role in India's power generation. Generation is a de-licensed activity as per the Electricity Act, 2003 and 100% Foreign Direct Investment (FDI) in the power sector in India is permitted for generation from all sources (except atomic energy). As on 30.06.2024, total installed capacity in the country is 4,46,190 MW and out of which the contribution of private sector is approximately 2,34,065 MW i.e. 52.5%. Also, most of the renewable energy projects in the country are being set up by private sector developers selected through a transparent bidding process.

.....2.

(e) : Major initiatives taken by the Union Government in promoting private sector investment in power generation sector are as under:-

i. **Issued notification of Revised Tariff Policy on 28.01.2016 with various provisions to encourage investment including from private sector in power generation sector.**

ii. **Issued guidelines for procurement of power by DISCOMs from Generators on Long Term, Medium Term and Short term basis, which in turn facilitated promoting investment in power generation.**

iii. **Issued notification of Electricity (Late Payment Surcharge) Rules 2022 to provide payment security mechanism to generators for the energy supplied by them.**

iv. **Issued notification of Promoting Renewable Energy through Green Energy Open Access Rules 2022.**

v. **Setting up of Ultra Mega Renewable Energy Parks to provide land and transmission to Renewable Energy (RE) developers for installation of RE projects at large scale.**

vi. **Laying of new transmission lines and creating new sub-station capacity under the Green Energy Corridor Scheme for evacuation of renewable power.**

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GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.685
ANSWERED ON 25.07.2024

SOARING ELECTRICITY DEMAND IN KERALA

685 SHRI V K SREEKANDAN:

Will the Minister of POWER be pleased to state:

(a) whether it is a fact that the State of Kerala has been facing soaring electricity demand amid heat waves and the State has been experiencing a huge gap between demand and supply;

(b) if so, the steps taken by the Government in this regard;

(c) whether it is also true that the State has made a request for allocation from the pool of unallocated quota of Central sector generating stations, if so the details thereof;

(d) whether the Union Government agreed to provide additional power to the State from Central stations; and

(e) if so the details thereof?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b) : Kerala has touched Peak Demand of 5797 MW in 2024-25 as compared to 5301 MW in 2023-24, showing a growth of 9.35%. The details of month-wise power supply position in terms of Energy during April-2024 to June-2024 is given at Annexure.

The energy supplied has been commensurate with the energy requirement during the months of April, 2024 to June, 2024 in Kerala. There has been no gap between demand and supply of power.

(c) to (e) : In pursuance of a request received from Kerala on 11.03.2024 for allocation of power from NTPC Thermal Power Plant, Ministry of Power had allocated 180 MW power from Telangana STPP from 16.04.2024 to 30.05.2024.

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 685 ANSWERED IN THE LOK SABHA ON 25.07.2024

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The details of month-wise power supply position in terms of Energy during April-2024 to June-2024.

Months	Energy [in Million Units (MU)]			
	Energy Requirement	Energy Supplied	Energy not Supplied	
	(MU)	(MU)	(MU)	(%)
April, 2024	3,261	3,259	2	0.1
May, 2024	2,841	2,841	0	0.0
June, 2024 (*)	2,428	2,428	0	0.0

(*)-Provisional

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GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.688
ANSWERED ON 25.07.2024

COAL-FIRED ELECTRICITY OUTPUT AND EMISSIONS

688 SHRI ARUN BHARTI:

Will the Minister of POWER be pleased to state:

(a) the details regarding the data on India's coal-fired electricity output and emissions during each of the past five years highlighting the factors contributing to record highs;

(b) whether the Government has data on the effectiveness of current technologies and practices in reducing emissions from coal-fired power plants including any recent advancements or pilot projects and if so, the details thereof; and

(c) the measures taken by the Government to abide by the international conventions during the process of coal-fired electricity output?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : The details regarding the data on India's coal-fired electricity output and emissions during each of the past five years are given below:

Year	Electricity Generation from Coal (in Billion Units)	CO_2 Emission (in Million Metric Tonnes)
2018-19	987.68	897.28
2019-20	988.72	897.28
2020-21	959.72	867.92
2021-22	951.88	853.82
2022-23	1043.83	943.04

With the rapid expansion & growth of the Indian economy, the demand of electricity is also witnessing an unprecedented growth. The electricity demand in India has witnessed a growth of around 9% for the years 2021-22 and 2022-23.The total emissions have increased commensurate with the increase in generation of the electricity.

.....2.

However, due to increasing share of Renewable Energy in the Grid, the carbon intensity of the grid is reducing. There is significant decrease of about 9% in average carbon emission factor of the grid electricity in India from 2013-14 to 2022-23.

(b) & (c) : For reduction of emission levels of Thermal Power Plants (TPPs), following measures have been taken by the Government:

- **Installation of efficient Ultra Supercritical/Supercritical Units - Promotion of installation of efficient Ultra Supercritical/Supercritical units over Subcritical Thermal Units as these units are more efficient and their emission per unit of electricity generation is less than subcritical units. A total capacity of Supercritical/ Ultra-supercritical units of 65,290 MW (94 Units) and 4,240 MW (06 units) have been commissioned respectively till 30.06.2024.**

- **Biomass Co-firing - Ministry of Power has issued a policy on utilization of Biomass for Power generation through co-firing in coal based power plants. The policy mandates 5-7% co-firing of Biomass primarily of agro residue with coal, after assessing the technical feasibility. As of June 2024, 8.14 lakh Tonnes of cumulative Biomass have been co-fired pan India resulting in reduction of about 0.97 Million Tonnes of CO_2 emissions from Thermal Power Plants.**

- **Reduction of Stack Emissions - MoEF&CC vide notification dated 07.12.2015 and its subsequent amendments has notified norms in respect of reducing stack emissions such as Suspended Particulate Matter (SPM), SOx& NOx from coal based Thermal Power Plants. To meet these standards, Thermal Power Plants are using techniques like Electro Static Precipitator (ESP), Flue Gas Desulphurization (FGD), NOx Combustion Modification etc.**

- **The inefficient and old thermal power plants having capacity of about 18,802.24 MW comprising 267 units have already been retired till 30.06.2024.**

- **NTPC Ltd. has commissioned a 20 Tonnes Per Day (TPD) capacity Pilot Carbon Capture Project at Vindhyachal Thermal Power Station.**

India in its Intended Nationally Determined Contributions (INDCs) stands committed to achieve about 50 percent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030. At present India has already achieved 45.5% Installed Capacity from non-fossil fuel-based resources.

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