

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
STARRED QUESTION NO.388
ANSWERED ON 22.03.2018

LOAD DISPATCH CONTROL NETWORK

*388. DR. P. VENUGOPAL:

Will the Minister of POWER
be pleased to state:

- (a) whether the Government is considering to involve qualified/trained personnel to run/operate the Load Dispatch centres/network across the country;
- (b) if so, the details thereof;
- (c) whether the planning and the effective operation of Load Dispatch centres require trained manpower, with higher outlays for compensation and if so, the details thereof;
- (d) whether the States oppose construction of excess capacity as it imposes a level of financial burden and if so, the details thereof; and
- (e) whether the Government proposes to develop/build intra-State transmission capacity as well and if so, the details thereof?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR 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) OF STARRED QUESTION NO.388 ANSWERED IN THE LOK SABHA ON 22.03.2018 REGARDING LOAD DISPATCH CONTROL NETWORK.

(a) & (b) : Load Dispatch Centres (LDCs) across the country are operated by qualified and trained manpower. Since April 2011, training and certification of these operators at LDCs are being conducted in association with the National Power Training Institute. There are basic and specialist level of certification for the system operators.

(c) : Considering the highly specialized and technical nature of functioning of LDC, the Government of India constituted a Committee on "Manpower, Certification and Incentives for System Operation and Ring fencing Load Dispatch Centres" in 2008 which, *inter-alia*, recommended a suitable compensation structure to attract and retain talent. Further, the CERC Regulations also provide for certification linked incentives to the certified system operator at RLDCs and NLDC. At the SLDC level, similar infrastructure and processes are recommended.

(d) : During the Transmission Planning by the Centre and the States, excess capacity is created to address the technical requirement of reliability, security and redundancy. The N-1 criterion is followed which is a minimum system security measure in the transmission network to address redundancy avoiding potential power interruptions and/or system failure.

The Inter State Transmission System is planned by the Central Transmission Utility (CTU) in consultation with Central Electricity Authority (CEA) based on generation plan and long term power transfer requirements. This transmission system is, thereafter, discussed in the meetings of Standing Committee and Regional Power Committee and finalized after consultation with all the stakeholders including State utilities.

For the intra-State Transmission Systems, planning is carried out by the respective State Transmission Utility (STU). However, the intra state transmission system, which have bearing on inter-state transmission system (400 kV and 220 kV voltage level) are discussed and approved by the Standing Committee on Power System Planning in its meetings. Further, the intra state transmission system posed for multi lateral funding or Government of India funding / grant are approved by CEA.

(e) : As per the Section 39 of the Electricity Act, 2003, the responsibility for development of intra-state transmission system lies with the respective STUs. However, to supplement the efforts of State Governments, Govt. of India has approved schemes for strengthening of intra state Transmission and Distribution systems in Jammu & Kashmir and North-Eastern States including Sikkim. The details are:

- i. 220kV Transmission System from Alusteng (Srinagar) to Leh (via Drass, Kargil, Khalsti and Leh Sub-station in Jammu & Kashmir (J&K) amounting to Rs. 1788 Crore.
- ii. North Eastern Region Power System Improvement Project (NERPSIP) amounting to Rs.5111 Crore through the budget of Ministry of Power and the World Bank on 50:50 basis.
- iii. Comprehensive scheme for strengthening of transmission and distribution system in Arunachal Pradesh and Sikkim amounting to Rs.4754 Crore.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
STARRED QUESTION NO.396
ANSWERED ON 22.03.2018

EXPORT OF SURPLUS POWER

*396. SHRI PRALHAD JOSHI:

Will the Minister of POWER
be pleased to state:

- (a) whether India is a power surplus nation;
- (b) if so, the details thereof;
- (c) whether his ministry is exploring the option of exporting surplus power to other countries; and
- (d) if so, the details thereof?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

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

STATEMENT

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) OF STARRED QUESTION NO.396 ANSWERED IN THE LOK SABHA ON 22.03.2018 REGARDING EXPORT OF SURPLUS POWER.

(a) & (b) : As on 31.01.2018, the installed generation capacity is 334 Giga Watt (GW) which is more than sufficient to meet the peak demand of 165 GW occurred during the current year (upto January 2018).

As the all India installed capacity of power plants in the country is more than the demand, there are possibilities of exporting power to neighbouring countries.

(c) & (d) : Presently, India is exporting power to Bangladesh, Nepal and Myanmar. Details of export of power and plan to increase it are given below:

- i. India- Bangladesh: India is currently supplying around 660 MW power to Bangladesh and it would increase by 840 MW after completion of additional transmission links.
- ii. India- Nepal: India is currently supplying around 465 MW power to Nepal and it would further increase by 310-410 MW with the operation of 132 kV D/c Dhalkebar-Muzzafarpur line at 400 kV.
- iii. India- Myanmar: India is supplying about 2-3 MW of power from Manipur (India) to Myanmar through 11 kV transmission line from Moreh in Manipur (India) to Tomu town in Myanmar.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4375
ANSWERED ON 22.03.2018

POWER CRISIS IN ASSAM

4375. SHRI BADRUDDIN AJMAL:

Will the Minister of POWER
be pleased to state:

- (a) whether the State of Assam generally and Dhubri district specially is facing acute power crisis due to low grid capacity, if so, the details thereof;
- (b) whether the Government is aware that Dhubri district was once a vibrant centre of trade and commerce and it is today the most marginalized and isolated due to power crisis which has led to shutdown of industries and small enterprises, if so, the detail thereof;
- (c) whether the Government proposes to take any initiative for generating more power;
- (d) if so, the details thereof; and
- (e) if not, the reasons therefor?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) : The State of Assam faced energy and peak shortage of 3.5% and 4.2% respectively during the current year (April, 2017 - February, 2018). Presently, at the Inter-state level, there are no transmission constraints for import of power to Assam. The Available Transmission Capacity (ATC) from Eastern Region to North Eastern Region is 1025 MW. However, there are some Intra-state transmission constraints in some pockets of Assam.

(b) to (e) : Electricity is a concurrent subject. Supply and distribution of electricity in a State / UT, including Dhubri district, is within the purview of the respective State Government / State Power Utility. The Government of India supplements the efforts of the State Governments by establishing power plants in Central Sector through CPSUs and allocating power there from to them. At present, Assam has been allocated 1304 MW power from Central Generating Stations. During 2016-17, the assistance from Central Generating Stations to Assam was 5929 Million Units (65.7%) against their total energy requirement of 9020 Million Units. Adequate power is available in the grid and the state can purchase power to meet their demand from Power exchanges or through competitive bidding route under Discovery of Efficient Electricity Price (DEEP) portal.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4377
ANSWERED ON 22.03.2018

UDAY

4377. SHRI G.M. SIDDESHWARA:

Will the Minister of POWER
be pleased to state:

- (a) whether the impact of Ujwal Discom Assurance Yojana (UDAY) launched in the year 2015 with a view to bring back good health in State-owned Discoms has started having a wrong impact on Discoms and is being turned into another window to pile up fresh debts;
- (b) if so, the details thereof;
- (c) whether the Government has made any review of implementation of UDAY, if so, the findings thereof; and
- (d) the steps being taken by the Government to implement the scheme in letter and spirit and direct Discoms not to use it as another window to pile up debts?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) & (b) : As per information received from the States, the gap between Average Cost of Supply (ACS) and Average Revenue Realized (ARR) has reduced from 59 paisa per unit in FY 2015-16 to about 41 paisa per unit in FY 2016-17.

(c) & (d) : Review for implementation of UDAY is a continual process which includes monitoring of debt of DISCOMs. A Monitoring Committee, under the chairmanship of Secretary (Power), has been constituted to ensure close monitoring of performance of the participating States under UDAY. The Committee reviews the operational and financial parameters of participating States at regular intervals. Further, State-specific focused meetings have also been held to handhold States/UTs and the DISCOMs for effective turnaround. Besides, this scheme is also being monitored regularly in the Review, Planning & Monitoring Meetings (RPMs) as well.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4380
ANSWERED ON 22.03.2018

ASSESSMENT OF DEMAND OF POWER

4380. SHRI K.R.P. PRABAKARAN:

Will the Minister of POWER
be pleased to state:

- (a) whether the Government has assessed the demand of electricity for the next five years;
- (b) if so, the details thereof along with the action being taken by the Government to meet the demand;
- (c) whether progress of the power projects is being affected due to paucity of funds and if so, the details thereof and the corrective action taken in this regard; and
- (d) other steps being taken to meet the future increase in demand?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) to (c) : As per 19th Electric Power Survey (EPS) Report, the Electrical Energy Requirement and Peak electricity demand on all-India basis during the year 2021-22 is expected to be around 15,66,023 Million Units and 2,25,751 Mega Watt respectively, against already installed capacity of 3,33,550 MW.

As per Electricity Act, 2003, electricity generation is a delicensed activity and any generating company may establish a generating station. Funds for setting up of generation project(s) are arranged by the project developers themselves.

To meet the power requirement, conventional capacity comprising of 48,261 MW Thermal, 6,823 MW Hydro and 3,300 MW Nuclear are at various stages of construction and are likely to yield benefits during the period 2017-2022. In addition, Government of India has set a target to have 175 GW of Installed Capacity from Renewable Energy Sources (RES) by 2021-22. With the likely generation capacity addition, the electricity demand projected by the 19th EPS will be fully met on all-India basis.

(d) : The other steps being taken by the Government to meet the future increase in demand are as under:-

- (i) Government of India is assisting states through schemes like Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS) etc. for strengthening of sub-transmission and distribution networks.
- (ii) Government is also supporting in electrification of villages and providing access of electricity to all unelectrified households through Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya).
- (iii) Coal blocks have been allotted to central/state power utilities to improve domestic coal availability.
- (iv) The Government has introduced a scheme SHAKTI (Scheme for Harnessing and Allocating Koyala (Coal) Transparently in India)-2017, to provide coal linkages to the power plants which do not have any linkage.
- (v) The Government has introduced flexibility in utilization of domestic coal amongst power generating stations to reduce the cost of power generation.

GOVERNMENT OF INDIA
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LOK SABHA
UNSTARRED QUESTION NO.4388
ANSWERED ON 22.03.2018

SAUBHAGYA

4388. SHRI RAJENDRA AGRAWAL:

Will the Minister of POWER
be pleased to state:

- (a) the salient features of the Saubhagya scheme;
- (b) the total outlay for the scheme and the outlay for rural and urban households;
- (c) whether the scheme will help the country to meet its global climate change commitments; and
- (d) if so, the details thereof?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) & (b) : Government of India has launched Pradhan Mantri Sahaj Bijli Har Ghar Yojana – Saubhagya in September, 2017 with an outlay of Rs.16,320 Crore. Gross Budgetary Support (GBS) for rural areas is Rs.10587.50 crore and for urban areas is Rs.1732.50 Crore. The salient features of the scheme, are as under:

- (i) Last mile connectivity and electricity connections to all un-electrified households in rural areas.
- (ii) Solar Photo Voltaic (SPV) based standalone systems for un-electrified households located in remote and inaccessible villages / habitations, where grid extension is neither feasible nor cost effective.
- (iii) Last mile connectivity and electricity connections to all remaining economically poor un-electrified households in urban areas. Non-poor urban households are excluded from this scheme.

(c) & (d) : 'Saubhagya' scheme includes provision of solar photo voltaic (SPV) based standalone systems to provide electricity to un-electrified households in remote & inaccessible villages/habitations, where grid extension is not feasible or cost effective. The use of solar energy/electricity for these villages would reduce carbon emissions, thus helping the country to meet global climate change commitments.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4400
ANSWERED ON 22.03.2018

DIRECT SUBSIDY TO CONSUMERS

4400. SHRI ASHOK SHANKARRAO CHAVAN:

Will the Minister of POWER
be pleased to state:

- (a) the details of subsidy given by the State Governments for supply of power to consumers during each of the last two years and the current year, State/UT-wise;
- (b) whether the Government has constituted an expert Panel to study direct subsidy for power consumers;
- (c) if so, the details thereof along with composition of the Panel;
- (d) whether the Panel has submitted its report to the Government;
- (e) if so, the details thereof and the main recommendations made by the Panel; and
- (f) the steps taken/being taken by the Government on the basis of the recommendations of the Panel?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) : The total subsidy booked by distribution utilities and the subsidy released by the State Governments for the years 2013-14 to 2015-16 are as given below:

(Rs in crore)

	2013-14	2014-15	2015-16
Subsidy Booked	37,052	47,965	57,680
Subsidy Received	36,758	45,584	55,283

The state-wise and utility-wise details of subsidy booked and received are given in Annexure.

(b) to (f) : There is no Expert Panel constituted by Ministry of Power to study direct subsidy to power consumers.

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 4400 ANSWERED IN THE LOK SABHA ON 22.03.2018.

STATE-WISE DETAILS OF SUBSIDY BOOKED AND RECEIVED BY UTILITIES DURING 2013-14 TO 2015-16

Region	State	Utility	2013-14		2014-15		2015-16	
			Subsidy Booked	Subsidy Received	Subsidy Booked	Subsidy Received	Subsidy Booked	Subsidy Received
Eastern	Bihar	NBPDCL	1,025	1,025	1,217	1,023	1,579	1,579
		SBPDCL	1,631	1,631	1,675	1,675	2,811	2,811
	Bihar Total		2,656	2,656	2,892	2,698	4,390	4,390
	Jharkhand	JSEB	967	967				
		JBVNL	533	533	2,107	2,107	1,600	1,600
	Jharkhand Total		1,500	1,500	2,107	2,107	1,600	1,600
	Odisha	CESU	0	0	0	0	0	0
		NESCO	0	0	0	0		
		SESCO	0	0	0	0		
		WESCO	0	0	0	0		
		NESCO Utility					0	0
		SESCO Utility					0	0
		WESCO Utility					0	0
	Odisha Total		0	0	0	0	0	0
	Sikkim	Sikkim PD	0	0	0	0	0	0
	Sikkim Total		0	0	0	0	0	0
	West Bengal	WBSEDCL	0	0	0	0	0	0
	West Bengal Total		0	0	0	0	0	0
Eastern Total			4,156	4,156	4,999	4,804	5,990	5,990
North Eastern	Arunachal Pradesh	Arunachal PD	0	0	0	0	0	0
		Arunachal Pradesh Total		0	0	0	0	0
	Assam	APDCL	165	0	269	269	335	245
	Assam Total		165	0	269	269	335	245
	Manipur	Manipur PD	0	0				
		MSPDCL			0	0	216	216
	Manipur Total		0	0	0	0	216	216
	Meghalaya	MePDCL	15	15	110	110	24	24
	Meghalaya Total		15	15	110	110	24	24
	Mizoram	Mizoram PD	0	0	0	0	142	142
	Mizoram Total		0	0	0	0	142	142
	Nagaland	Nagaland PD	0	0	0	0	0	0
	Nagaland Total		0	0	0	0	0	0
	Tripura	TSECL	40	40	62	40	69	40
	Tripura Total		40	40	62	40	69	40
North Eastern Total			220	55	441	419	785	666
Northern	Delhi	BSES Rajdhani	0	0	0	0	0	0
		BSES Yamuna	0	0	0	0	0	0
		TPDDL	0	0	0	0	0	0
	Delhi Total		0	0	0	0	0	0
	Haryana	DHBVNL	1,460	1,460	2,098	2,098	2,529	2,529
		UHBVNL	3,520	3,520	3,137	3,137	3,794	3,794
	Haryana Total		4,981	4,981	5,235	5,235	6,323	6,323
	Himachal Pradesh	HPSEB Ltd.	0	0	0	0	0	0
	Himachal Pradesh Total		0	0	0	0	0	0
	Jammu & Kashmir	J&K PDD	0	0	0	0	0	0
	Jammu & Kashmir Total		0	0	0	0	0	0
	Punjab	PSPCL	4,696	4,696	5,875	4,642	5,761	4,847
	Punjab Total		4,696	4,696	5,875	4,642	5,761	4,847
	Rajasthan	AVVNL	579	579	578	578	557	557
		JDVVNL	375	375	466	466	472	472
		JVVNL	651	651	816	816	755	755
	Rajasthan Total		1,604	1,604	1,859	1,859	1,784	1,784

	Uttar Pradesh	DVVN	918	918	2,578	2,578	2,884	2,757
		KESCO	0	0	122	122	6	6
		MVVN	818	818	1,398	1,217	1,593	1,593
		Pash VVN	1,547	1,547	1,848	1,702	1,241	1,173
		Poorv VVN	1,891	1,891	2,948	2,948	3,001	3,001
	Uttar Pradesh Total		5,174	5,174	8,893	8,568	8,724	8,530
	Uttarakhand	Ut PCL	0	0	0	0	0	0
	Uttarakhand Total		0	0	0	0	0	0
Northern Total			16,455	16,455	21,862	20,304	22,593	21,484
Southern	Andhra Pradesh	APCPDCL	1,627	1,627				
		APEPDCL	255	255	875	875	868	868
		APNPDCL	2,555	2,555				
		APSPDCL	1,868	1,868	2,250	2,097	2,318	2,318
	Andhra Pradesh Total		6,306	6,306	3,125	2,973	3,186	3,186
	Karnataka	BESCOM	534	534	0	0	1,616	1,554
		CHESCOM	879	823	958	954	1,042	1,042
		GESCOM	0	0	0	0	0	0
		HESCOM	212	212	80	80	3,076	2,307
		MESCOM	0	0	0	0	511	470
	Karnataka Total		1,626	1,570	1,038	1,035	6,245	5,372
	Kerala	KSEB	0	0				
		KSEBL	0	0	0	0	0	0
	Kerala Total		0	0	0	0	0	0
	Puducherry	Puducherry PD	5	5	1	0	3	0
	Puducherry Total		5	5	1	0	3	0
	Tamil Nadu	TANGEDCO	4,985	4,918	6,953	6,953	7,695	7,695
	Tamil Nadu Total		4,985	4,918	6,953	6,953	7,695	7,695
	Telangana	TSNPDCL			2,399	2,000	3,533	3,239
		TSSPDCL			1,264	1,264	724	724
	Telangana Total				3,663	3,264	4,257	3,963
Southern Total			12,921	12,798	14,780	14,225	21,386	20,216
Western	Chhattisgarh	CSPDCL	0	0	465	465	407	407
	Chhattisgarh Total		0	0	465	465	407	407
	Goa	Goa PD	0	0	0	0	0	0
	Goa Total		0	0	0	0	0	0
	Gujarat	DGVCL	44	44	50	50	49	49
		MGVCL	67	67	71	71	74	74
		PGVCL	438	438	439	439	441	441
		UGVCL	551	551	541	541	536	536
	Gujarat Total		1,100	1,100	1,100	1,100	1,100	1,100
	Madhya Pradesh	MP Madhya Kshetra VVCL	781	781	1,154	1,116	1,464	1,464
		MP Paschim Kshetra VVCL	922	922	2,294	2,294	3,000	3,000
		MP Purv Kshetra VVCL	498	492	870	857	954	954
	Madhya Pradesh Total		2,201	2,195	4,318	4,268	5,418	5,418
	Maharashtra	MSEDCL	0	0	0	0	0	0
	Maharashtra Total		0	0	0	0	0	0
Western Total			3,301	3,295	5,883	5,833	6,925	6,925

Source: CEA

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4401
ANSWERED ON 22.03.2018

ACCIDENTS IN POWER PLANTS

†4401. SHRIMATI KAMLA DEVI PAATLE:

Will the Minister of POWER
be pleased to state:

- (a) the number of accidents which took place in various under construction/ current power plants in different States including Chhattisgarh during each of the last three years and current year along with the nature of such accidents, plant-wise;
- (b) the number of persons who lost their lives/got injured in such accidents during the aforesaid period and the approximate loss of property caused by such accidents, plant-wise;
- (c) the amount of compensation and other facilities given to the families of deceased/injured persons in such accidents;
- (d) the annual average expenditure incurred on maintenance of these plants during the said period; and
- (e) the corrective steps taken/ proposed to be taken by the Government to avoid recurrence of such accidents in future?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) to (d) : The details of accidents in various under construction/operational power plants, the number of persons killed or injured due to these accidents, loss of property, the amount of compensation paid during the last three years and the current year and facilities provided to persons injured, killed and average annual expenditure incurred on maintenance of these plants during the said period are furnished in the Annexure.

(e) : Under Section 162 of the Electricity Act, 2003, the Central/State Governments have their own Electrical Inspectorates to enforce the said safety regulations in electrical installations belonging to or under the control of their respective jurisdiction.

Based on the provisions specified under Section-53 of Electricity Act 2003, Central Electricity Authority has framed the Safety Regulations, namely; Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 and subsequent amendment namely; Central Electricity Authority (Measures relating to Safety and Electric Supply) Amendment Regulations, 2015 which are applicable for all installations in the country.

On occurrence of electrical accidents in the electrical installations, Chief Electrical Inspector/Electrical Inspector appointed by the appropriate Government, conduct enquiries on case to case basis and suggest remedial measures for prevention of such accidents.

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (d) OF UNSTARRED QUESTION NO. 4401 ANSWERED IN THE LOK SABHA ON 22.03.2018.

Year	Name of organization	Name of operational /under construction power plant	No. of persons killed	Persons injured	Loss of property (Rs. in crores)	Compassion paid (in Rs.crores)		Average annual expenditure on maintenance of plants (Rs. in crores)
						Killed	Injured	
2014-15	National Thermal Power Corporation (NTPC)	Barh, Bihar	4	Nil	Nil	Nil	Nil	111.16
		Badarpur, Delhi	1	2	Nil	Nil	Nil	
		Rihand, Uttar Pradesh	1	1	Nil	Nil	Nil	
		Kahalgaon, Bihar	2	1	Nil	Nil	Nil	
		Simhadri, Andhra Pradesh	1	2	Nil	Nil	Nil	
		Vindhyachal, Madhya Pradesh	3	Nil	Nil	Nil	Nil	
		Mouda, Maharashtra	1	5	Nil	Nil	Nil	
		Bongaigaon, Assam	1	4	Nil	Nil	Nil	
		Solapur, Maharashtra	1	Nil	Nil	Nil	Nil	
		Kudgi, Karnataka	1	Nil	Nil	Nil	Nil	
		Sipat, Chhattisgarh	Nil	4	Nil	Nil	Nil	
		Ramagundam, Telengana	Nil	1	Nil	Nil	Nil	
		Korba, Chhattisgarh	Nil	8	Nil	Nil	Nil	
		Unchahar, Uttar Pradesh	Nil	1	Nil	Nil	Nil	
	Farakka, West Bengal	Nil	9	Nil	Nil	Nil		
	Lara, Chhattisgarh	Nil	1	Nil	Nil	Nil		
	National Hydroelectric Power Corporation (NHPC)	Dhauliganga Power Station, Uttarakhand	Nil	Nil	Nil	Nil	Nil	10.32
		Dulhasti Power Station, Uttarakhand	Nil	Nil	Nil	Nil	Nil	18.21
		Salal Power Station Jammu & Kashmir	Nil	Nil	Nil	Nil	Nil	17.94
URI-II Power Station Jammu & Kashmir		Nil	Nil	62.5*	Nil	Nil	2.7	
Kishanganga HE Project, Jammu & Kashmir		1	1	Nil	0.1	Nil	Nil	
Subansiri Lower HE Project, Assam & Arunachal Pradesh		Nil	2	Nil	Nil	Nil	Nil	

Year	Name of organization	Name of operational /under construction power plant	No. of persons killed	Persons injured	Loss of property (Rs. in crores)	Compassion paid (in Rs. crores)		Average annual expenditure on maintenance of plants (Rs. in crores)	
						Killed	Injured		
2014-15	North Eastern Electric Power Corporation (NEEPCO)	Kameng HEP, Arunachal Pradesh	3	Nil	Nil	0.20	Nil	Nil	
		Agartala Gas Turbine Power Plant, Tripura	1	2	Nil	0.136	Treatment given in NEEPCO dispensary.	10.07	
		Pare HEP, Arunachal Pradesh	1	Nil	Nil	0.057	Nil	Nil	
		Assam Gas Based Project, Assam	Nil	Nil	Nil	Nil	Nil	31.35	
		Kopili HEP, Assam	Nil	Nil	Nil	Nil	Nil	9.57	
		Doyang HEP, Nagaland	Nil	Nil	Nil	Nil	Nil	1.39	
		Ranganadi HEP, Arunachal Pradesh	Nil	Nil	Nil	Nil	Nil	8.96	
	Damodar Valley Corporation (DVC)#	Bokaro Thermal Power Station, Jharkhand	Nil	8	Nil	Nil	Nil	51.27	
		Chandrapura Thermal Power Station, Jharkhand	Nil	6	Nil	Nil	Nil	97.56	
		Durgapur Thermal Power Station, West Bengal	Nil	9	Nil	Nil	Nil	40.66	
		Panchey&Tilayia, Jharkhand	Nil	Nil	Nil	Nil	Nil	3.33	
		Mejia Thermal Power Station, West Bengal	1	11	Nil	Nil	Nil	145.99	
		Kodarma Thermal Power Station, Jharkhan	Nil	Nil	Nil	Nil	Nil	26.55	
		Durgapur Steel Thermal Power Station, West Bengal	2	Nil	Nil	Nil	Nil	54.19	
		Raghunathpur Thermal Power Station, West Bengal	2	1	Nil	Nil	Nil	Nil	
		Maithon Hydel, Jharkhand	1	Nil	Nil	Nil	Nil	1.51	
	Tehri Hydro Development Corporation Ltd. (THDC)	Tehri HPP (1000 MW, under operation) Uttarakhand	Nil	Nil	Nil	Nil	Nil	Treatment is given in Tehri dispensary.	23.02
		Koteshwar HEP (400 MW, under operation), Uttarakhand	Nil	7	Nil	Nil	Nil	Treatment is given in in Koteshwar dispensary.	

Year	Name of organization	Name of operational /under construction power plant	No. of persons killed	Persons injured	Loss of property (Rs. in crores)	Compassion paid (in Rs. crores)		Average annual expenditure on maintenance of plants (Rs. in crores)
						Killed	Injured	
2014-15	THDC	Tehri PSP (1000 MW, under construction), Uttarakhand	1	12	Nil	0.062	Nil	0.02 (under construction projects)
		Vishnugad Pipalkoti HEP (444 MW, under construction), Uttarakhand	Nil	Nil	Nil	Nil	Nil	
	Satluj Jal Vidyut Nigam Limited (SJVNL)	Nathpa Jhakri Hydro Power Station, Himachal Pradesh	Nil	2	Nil	Nil	0.0074.	34.26.
		Rampur Hydro Power Station, Himachal Pradesh	Nil	3	Nil	Nil	0.0077	5.8
	Bhakra Beas Managemnet Board (BBMB)	Bhakra Power Plant, Punjab	Nil	Nil	Nil	Nil	Nil	1.5
		Ganguwal&Kotla Power Plant, Punjab	Nil	Nil	Nil	Nil	Nil	0.463
		Dehar Power Plant, Himachal Pradesh	Nil	Nil	Nil	Nil	Nil	17.00
		Pong Power Plant, Himachal Pradesh	Nil	Nil	Nil	Nil	Nil	0.99
2015-16	NTPC	Barh(Bihar)	3	2	Nil	As regards NTPC, the deceased / injured persons in case of accident are given compensation under the Workmen Compensation Act as per the formula applicable in each case. The nominee of the deceased is aided in the transport of the mortal remains to their native place. In case of injured, affected persons are provided free of cost medical treatment in township/nearby hospitals. At some of NTPC units, an ex-gratia amount over and above the statutory benefits, is given by the immediate employer / employees by making voluntary contribution.	138.81	
		Korba (Chhattisgarh)	2	2	Nil			
		Tanda (U.P)	1	Nil	Nil			
		Unchahar (U.P)	2	1	Nil			
		Vindhyachal(M.P)	3	1	Nil			
		Singrauli (M.P)	1	Nil	Nil			
		Kahalgaon (Bihar)	Nil	1	Nil			
		Dadri (U.P)	Nil	2	Nil			
		Farakka (W.B)	Nil	7	Nil			
		Solapur (Maharashtra)	1	1	Nil			
		Ramagundam (Telangana)	Nil	3	Nil			
		Rihand (U.P)	Nil	2	Nil			
		Simhadri (A.P)	Nil	1	Nil			
		Bongaigaon (Assam)	Nil	1	Nil			
		Mouda (Maharashtra)	3	1	Nil			
Kudgi, Karnataka	2	Nil	Nil					
Lara, Chhattisgarh	2	Nil	Nil					
Sipat, Chhattisgarh	1	Nil	Nil					

Year	Name of organization	Name of operational /under construction power plant	No. of persons killed	Persons injured	Loss of property (Rs. in crores)	Compassion paid (in Rs. crores)		Average annual expenditure on maintenance of plants (Rs. in crores)
						Killed	Injured	
2015-16	THDC	Tehri HPP (1000 MW, under operation), Uttarakhand	Nil	Nil	Nil	Nil	Treatment is given in Tehri dispensary.	16.57 (operational plants)
		Koteshwar HEP (400 MW, under operation), Uttarakhand	1	5	Ni	0.10	Treatment is given in Koteshwar dispensary.	
		Tehri PSP (1000 MW, under construction), Uttarakhand	Nil	6	Nil	Nil	Nil	0.02 (under construction projects)
		Vishnugad Pipalkoti HEP (444 MW, under construction), Uttarakhand	1	Ni	Nil	0.08	Nil	
	SJVNL	NathpaJhakri Hydro Power Station, Himachal Pradesh (H.P.)	Nil	1	Nil	Nil	0.0040	42.67.
		Rampur Hydro Power Station, H.P	Nil	1	Nil	Nil	0.0010	12.61
	BBMB	Bhakra Power Plant, Punjab	Nil	Nil	Nil	Nil	Nil	1.29.
		Ganguwal&Kotla Power Plant, Punjab	Nil	Nil	Nil	Nil	Nil	0.75.
		Dehar Power Plant, Himachal Pradesh	Nil	Nil	Nil	Nil	Nil	15.20
		Pong Power Plant, Himachal Pradesh	Nil	Nil	Nil	Nil	Nil	1.56.
2016-17	NTPC	Farakka (W.B.)	2	3	Nil	As regards NTPC, the deceased / injured persons in case of accident are given compensation under the Workmen Compensation Act as per the formula applicable in each case. The nominee of the deceased is aided in the transport of the mortal remains to their native place. In case of injured, affected persons are provided free of cost medical treatment in township/nearby hospitals. At some of NTPC units, an ex-gratia amount over and above the statutory benefits, is given by the immediate employer / employees by making voluntary contribution.	161.94.	
		Kahalgaon (Bihar)	2	1	Nil			
		Singrauli (U.P)	2	Nil	Nil			
		Korba (C.G)	1	1	Nil			
		Rihand(U.P)	2	Nil	Nil			
		Solapur (Maharashtra)	4	3	Nil			
		Darlipalli (Odisha)	2	Nil	Nil			
		Gadarwara(M.P)	4	Nil	Nil			
		Barh(Bihar)	1	6	Nil			
		Bongaigaon, Assam	1	2	Nil			
		Lara (Chhattisgarh)	2	5	Nil			
		Kudgi(Karnataka)	2	2	Nil			
		Tanda (U.P)	1	Nil	Nil			
		Auraiya (U.P)	Nil	1	Nil			
		Mouda (Maharashtra)	Nil	13	Nil			
		Ratnagiri (Maharashtra)	Nil	1	Nil			
		TSTPS (Odisha)	Nil	1	Nil			
		Vindhyachal (M.P)	Nil	1	Nil			
		Dadri (U.P)	Nil	1	Nil			
		Kayamkulam, Kerala	Nil	1	Nil			
Unchahar (U.P)	Nil	1	Nil					
Sipat (Chhattisgarh)	Nil	2	Nil					
Tapovan (Uttarakhand)	Nil	1	Nil					

Year	Name of organization	Name of operational /under construction power plant	No. of persons killed	Persons injured	Loss of property (Rs. in crores)	Compassion paid (in Rs. crores)		Average annual expenditure on maintenance of plants (Rs. in crores)
						Killed	Injured	
2016-17	THDC	Tehri HPP (1000 MW, under operation), Uttarakhand	Nil	Nil	Nil	Nil	Treatment is given in Tehri dispensary.	15.26 (operational plants)
		Koteshwar HEP (400 MW, under operation),Uttarakhand	Nil	6	Nil	Nil	Treatment is given in Koteshwar dispensary.	
		Tehri PSP (1000 MW, under construction), Uttarakhand	Nil	4	Nil	Nil	Nil	0.03 (under construction projects)
		VishnugadPipalkoti HEP (444 MW, under construction) Uttarakhand	Nil	Nil	Nil	Nil	Nil	
	SJVNL	NathpaJhakri Hydro Power Station, Himachal Pradesh	Nil	3	Nil	Nil	0.00514	44.49.
		Rampur Hydro Power Station, Himachal Pradesh	Nil	1	Nil	Nil	0.00342	19.02
	BBMB	Bhakra Power Plant, Punjab	Nil	Nil	Nil	Nil	Nil	1.95
		Ganguwal&Kotla Power Plant, Punjab	Nil	Nil	Nil	Nil	Nil	0.57.
		Dehar Power Plant, Himachal Pradesh	Nil	Nil	Nil	Nil	Nil	0.51
		Pong Power Plant, Himachal Pradesh	Nil	Nil	Nil	Nil	Nil	0.64
2017-18	NTPC	Barh(Bihar)	1	2	Nil	As regards NTPC, the deceased / injured persons in case of accident are given compensation under the Workmen Compensation Act as per the formula applicable in each case. The nominee of the deceased is aided in the transport of the mortal remains to their native place. In case of injured, affected persons are provided free of cost medical treatment in township/nearby hospitals. At some of NTPC units, an ex-gratia amount over and above the statutory benefits, is given by the immediate employer / employees by making voluntary contribution.	86.56	
		Mouda(Maharashtra)	1	5	Nil			
		Vindhyachal (M.P)	1	5	Nil			
		Farakka(W.B)	1	Nil	Nil			
		Simhadri (A.P)	2	1	Nil			
		Auraiya(U.P)	1	Nil	Nil			
		Unchahar(U.P)	45	Nil	Nil			
		Dadri(U.P)	1	1	Nil			
		Kudgi(Karnataka)	1	Nil	Nil			
		Gadarwara(M.P)	1	Nil	Nil			
		Darlipali (Odisha)	3	2	Nil			
		Lara (Chhattisgarh)	1	3	Nil			
		Khargone(M.P)	1	2	Nil			
		North Karanpura (Jharkhand)	1	2	Nil			
		Tanda (U.P)	Nil	3	Nil			
		Solapur (Maharashtra)	Nil	4	Nil			
		Koldam (H.P)	Nil	1	Nil			
		Annantpur SPV (A.P)	Nil	1	Nil			
		Bongaigaon (Assam)	Nil	2	Nil			
Korba (Chhattisgarh)	Nil	3	Nil					
Talcher K (Odisha)	Nil	1	Nil					
Kahalgaon (M.P.)	Nil	1	Nil					

Year	Name of organization	Name of operational /under construction power plant	No. of persons killed	Persons injured	Loss of property (Rs. in crores)	Compassion paid (in Rs. crores)		Average annual expenditure on maintenance of plants (Rs. in crores)
						Killed	Injured	
2017-18	NHPC	URI – II Power Station, Jammu & Kashmir	1	Nil	Nil	Rs. 8 lakhs compensation paid in addition to compensation payable under Workmen Compensation Act, 1923.		4.82
		Kishanganga HE Project, Jammu & Kashmir	1	3	Nil	Nil		Nil
		Subansiri Lower HE Project, Assam & Arunachal Pradesh	1	4	Nil	Nil		Nil
		Parbati-II HE Project, Himachal Pradesh	2	Nil	Nil	Rs. 0.076 Crs. & Insurance has been claimed under WC Policy		Nil
	NEEPCO	Doyang HEP, Nagaland,	1	Nil	Nil	0.078	Nil	Nil
		Kemang HEP, Arunachal Pradesh	Nil	1	Nil	Nil	0.04	Nil
	DVC#	Bokaro Thermal Power Station, Jharkhand	Nil	6	Nil	Nil	Nil	29.21
		Chandrapura Thermal Power Station, Jharkhand	Nil	4	Nil	Nil	Nil	45.02
		Durgapur Thermal Power Station, West Bengal	Nil	3	Nil	Nil	Nil	13.91
		Mejia Thermal Power Station, West Bengal	Nil	Nil	Nil	Nil	Nil	133.58
		Panchey & Tilayia, Jharkhand	Nil	Nil	Nil	Nil	Nil	1.25
		Kodarma Thermal Power Station Jharkhand	Nil	3	Nil	Nil	Nil	19.98
		Durgapur Steel Thermal Power Station, West Bengal	Nil	1	Nil	Nil	Nil	36.24
		Raghunathpur Thermal Power Station, West Bengal	Nil	Nil	Nil	Nil	Nil	16.81
		Maithon Hydel, Jharkhand	Nil	Nil	Nil	Nil	Nil	0.92
	THDC (Upto Dec.17)	Tehri HPP (1000 MW, under operation), Uttarakhand	Nil	Nil	Nil	Nil	Treatment is given in Tehri dispensary.	9.29 . (operational plants)
		Koteshwar HEP (400 MW, under operation), Uttarakhand	Nil	1	Nil	Nil	Treatment is given in Koteshwar dispensary	
		Tehri PSP (1000 MW, under construction) Uttarakhand	Nil	4	Nil	Nil	Treatment is given in Tehri dispensary	0.04 (under construction projects)
		Vishnugad Pipalkoti HEP (444 MW, under construction), Uttarakhand	Nil	Nil	Nil	Nil	Treatment is given in Pipalkoti dispensary	

Year	Name of organization	Name of operational /under construction power plant	No. of persons killed	Persons injured	Loss of property (Rs. in crores)	Compassion paid (in Rs. crores)		Average annual expenditure on maintenance of plants (Rs. in crores)
2017-18	SJVNL (Till date)	Nathpa Jhakri Hydro Power Station, Himachal Pradesh	Nil	4	Nil	Nil	0.0012	30.00
		Rampur Hydro Power Station, Himachal Pradesh	Nil	Nil	Nil	Nil	Nil	16.35
	BBMB (Upto Dec.17)	Bhakra Power Plant, Punjab	Nil	Nil	Nil	Nil	Nil	0.56
		Ganguwal & Kotla Power Plant, Punjab	Nil	Nil	Nil	Nil	Nil	0.40
		Dehar Power Plant, Himachal Pradesh	Nil	Nil	Nil	Nil	Nil	7.51.
		Pong Power Plant, Himachal Pradesh	Nil	Nil	Nil	Nil	Nil	0.56

* At URI-II Power Station was a fire accidents in Power house in 2014-15. An estimated loss of Rs.95 crore was initially assessed which was claimed from insurance company. However during restoration the expenditure of Rs. 62.50 Crore has been assessed.

** Chutak Power Station was under complete shutdown due to sudden ingress on water in power House in 2015-16. An estimated loss of Rs. 7.93 crore was initially assessed; which was claimed from insurance company. However during restoration the expenditure of Rs.8.84 Crore has been assessed.

DVC – Benefits are given under Workmen Compensation ACT 1923 or /and ESI Act 1948, whichever is applicable.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4407
ANSWERED ON 22.03.2018

COMMERCIAL CAPACITY OF NTPC GROUP

4407. SHRIMATI K. MARAGATHAM:

Will the Minister of POWER
be pleased to state:

- (a) whether the National Thermal Power Corporation Limited Group's capacity will cross 51,000 MW mark with the beginning of commercial operations of Unit 12 of the Kudghi Super Thermal Project, if so, the details thereof;
- (b) whether the commercial capacity of NTPC and NTPC Group would reach 44,492 MW and 51,383 MW, respectively with this expansion; and
- (c) if so, the details thereof?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) to (c) : Yes, Madam. The capacity of NTPC Ltd. has reached 44,500 MW and with its Joint Venture Companies and Subsidiaries companies with the beginning of commercial operation of 2nd Unit of Kudgi Super Thermal Power Station, Karnataka, the total capacity comes to 51391 MW.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4421
ANSWERED ON 22.03.2018

NTPC UNITS IN TRIBAL AND RURAL AREAS

†4421. SHRI KRUPAL BALAJI TUMANE:

Will the Minister of POWER
be pleased to state:

- (a) the details of the units of the NTPC set up in the tribal and rural areas in the country;
- (b) the details of the problems reported in these units during the last three years and the current year; and
- (c) the details of the steps taken to have a check on the problems which are arising time and again in these units?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) : Details of the units of NTPC set up in tribal and rural areas are attached as Annexure.

(b) & (c) : No major problem has occurred in operation of these units during the last three years.

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 4421 ANSWERED IN THE LOK SABHA ON 22.03.2018.

NTPC Units set up in Tribal area

A. NTPC owned Thermal Power Projects

S. No.	State (District)	Project	Fuel Type	Capacity (MW)
1.	Chhattisgarh (Korba)	Korba	Coal	2600
2.	Assam (Kokrajhar)	Bongaigaon	Coal	500 (Remaining 250 MW under construction)

NTPC Units set up in Rural areas

B. NTPC owned Thermal Power Projects

Sl. No.	State (District)	Project	Fuel Type	Capacity (MW)
1.	Andhra Pradesh (Visakhapatnam)	Simhadri	Coal	2000
2.	Bihar (Bhagalpur)	Kahalgaon	Coal	2340
3.	Bihar (Patna)	Barh	Coal	1320
4.	Chhattisgarh (Bilaspur)	Sipat	Coal	2980
5.	Gujarat (Bharuch)	Jhanor-Gandhar	Gas	657
6.	Gujarat (Surat)	Kawas	Gas	656
7.	Haryana (Faridabad)	Faridabad	Gas	432
8.	Karnataka (Bijapur)	Kudgi	Coal	2400
9.	Kerala (Alappuzha)	Kayamkulam	Naptha	360
10.	Madhya Pradesh (Singrauli)	Vindhyachal	Coal	4760
11.	Maharashtra (Nagpur)	Mouda	Coal	1660
12.	Maharashtra (Solapur)	Solapur	Coal	660
13.	Odisha (Angul)	Talcher-Kaniha	Coal	3000
14.	Odisha (Angul)	Talcher-Thermal	Coal	460
15.	Rajasthan (Baran)	Anta	Gas	419
16.	Telangana (Karimnagar)	Ramagundam	Coal	2600
17.	Uttar Pradesh (Ambedkar Nagar)	Tanda-I	Coal	440
18.	Uttar Pradesh (Auraiya)	Auraiya	Gas	663
19.	Uttar Pradesh (Gautam Budh Nagar)	Dadri	Coal	1820
20.	Uttar Pradesh (Gautam Budh Nagar)	Dadri	Gas	830
21.	Uttar Pradesh (Raebareli)	Unchahar	Coal	1050
22.	Uttar Pradesh (Sonebhadra)	Rihand	Coal	3000
23.	Uttar Pradesh (Sonebhadra)	Singrauli	Coal	2000
24.	West Bengal (Murshidabad)	Farakka	Coal	2100

C. NTPC owned Hydro Power Projects

1.	Himachal Pradesh (Bilaspur)	Koldam	800
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D. NTPC owned Renewable Power Projects

Sl. No.	State (District)	Project	Renewable Source	Capacity (MW)
1.	Andhra Pradesh (Ananthapuramu)	Ananthapuramu	Solar	250
2.	Gujarat (Rajkot, Amreli)	Rojmal	Wind	50
3.	Haryana (Faridabad)	Faridabad	Solar	5
4.	Madhya Pradesh (Mandsaur)	Mandsaur	Solar	250
5.	Madhya Pradesh (Rajgarh)	Rajgarh	Solar	50
6.	Odisha (Angul)	Talcher	Solar	10
7.	Rajasthan (Jodhpur)	Bhadla	Solar	260
8.	Telangana (Karim Nagar)	Ramagundam	Solar	10
9.	Uttar Pradesh (Gautam Budh Nagar)	Dadri	Solar	5
10.	Uttar Pradesh (Rae Bareli)	Unchahar	Solar	10
11.	Uttar Pradesh (Sonebhadra)	Singrauli	Small Hydro	8
12.	Uttar Pradesh (Sonebhadra)	Singrauli	Solar	15

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4428
ANSWERED ON 22.03.2018

SHORTAGE OF COAL FOR POWER PLANTS

†4428. SHRI SHER SINGH GHUBAYA:
DR. RAVINDRA KUMAR RAY:

Will the Minister of POWER
be pleased to state:

- (a) whether the power plants in the country are facing acute shortage of coal, if so, the details thereof;
- (b) whether the power plants at Badarpur, Bhatinda and Panki have been closed down due to the shortage of coal;
- (c) if so, the details thereof and the time by which the coal supply to the power plants is likely to be improved; and
- (d) the detailed reasons for unavailability of coal in the power plants?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) : Due to several measures taken by the Government, the availability of coal in power plants have improved. The overall coal stock position in the coal based power plants have increased from 7.3 Million Tonnes (MT) as on 19.10.2017 to 15.7 MT as on 18.03.2018, which is sufficient to meet the requirement for 10 days.

(b) to (d) : No, Madam. Power plants at Badarpur, Bhatinda and Panki are not generating power due to reasons other than shortage of coal.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4429
ANSWERED ON 22.03.2018

VIOLATION OF ELECTRICITY ACT

†4429. SHRIMATI RAMA DEVI:
SHRI LAXMAN GILUWA:

Will the Minister of POWER
be pleased to state:

- (a) whether the Government can sue someone for violation of the provisions of the Electricity Act/State Acts, regulations/ terms and conditions of license with reference to Section 146 of the Electricity Act, 2003;
- (b) if so, the details of the private power distribution companies which have violated the said rules during the last three years, State-wise;
- (c) the number of cases filed against them and the status of the said cases as on date, company-wise;
- (d) whether no cases have been filed against the private companies despite the violation of the said rules by the said companies; and
- (e) if so, the reaction of the Government thereto?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) : As per the provision of Section 146 of Electricity Act, 2003, whoever fails to comply with any order or directions given under Electricity Act shall be punishable with imprisonment for a term as specified in this Section.

(b) to (e) : Electricity is a concurrent subject. Distribution of electricity is a licensed activity. Distribution licenses are issued by respective State Electricity Regulatory Commission (SERC) and they have the responsibility of monitoring the implementation of the various provisions of Electricity Act, 2003. Information regarding any violation by the power distribution companies will be available with the State Government and Regulators.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4455
ANSWERED ON 22.03.2018

ELECTRICITY TO ALL

†4455. SHRI ALOK SANJAR:

Will the Minister of POWER
be pleased to state:

- (a) whether the Government has fixed a target for providing electricity to all;
- (b) if so, the details thereof;
- (c) whether the target fixed for generating electricity could not be achieved during each of the last three years and the current year;
- (d) if so, the details of the targets set and the achievements made during the period along with the reasons for non-achievement of targets; and
- (e) the details of the corrective measures proposed by the Government in this regard?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) & (b) : Electricity is a concurrent subject and distribution of electricity and management of associated functions is carried out by concerned State Govt / Distribution utility. Government of India has taken a joint initiative with all the States/UTs for preparation of State specific documents for providing 24x7 power supply to all households, industrial & commercial consumers and adequate supply of power to agricultural consumers as per State policy. All the State Governments and Union Territories have signed the "24X7 Power For All" document to provide electricity to all from 1st April 2019. Government of India supplements the efforts of States through its various schemes including Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS) etc.

(c) to (e) : The details of targets fixed and achievements made for power generation during the last three years are as under:

Generation Target and achievement during the last three years in Billion Units

Year	Target	Achievement	Achievement (in Percentage)
2014-15	1023.000	1048.673	102.50
2015-16	1137.500	1107.822	97.39
2016-17	1178.000	1160.141	98.48
2017-18 (upto February, 2018)	1123.565	1100.113	97.91

During the last three years (2014-15 to 2016-17), the Generation capacity of 83,009 MW comprising of 60,753 MW from the conventional sources and 22,256 MW from renewable sources have been added to meet the electricity requirement.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4473
ANSWERED ON 22.03.2018

ELECTRICITY AN ENFORCEABLE LEGAL RIGHT

4473. SHRI PRASUN BANERJEE:

Will the Minister of POWER
be pleased to state:

- (a) whether there is a plan to make the right to electricity an enforceable legal right, if so, the details thereof; and
- (b) the details of the proposed penal provisions for power companies who fail to provide 24 hours electricity?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) & (b) : One of the main objectives of Tariff Policy issued by the Central Government is to facilitate supply of adequate and uninterrupted Power to all categories of consumers. In the amendments to the Electricity Act, which are under consideration, Government of India proposes to provide for stiff penalties in case there is gratuitous load shedding. However, there will be no penalties in case of disruption of supplies because of technical faults/breakdowns or natural calamities etc.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4484
ANSWERED ON 22.03.2018

PER UNIT COST OF POWER

4484. SHRI ADHIR RANJAN CHOWDHURY:

Will the Minister of POWER
be pleased to state:

- (a) the details of the per unit cost of energy from all sources of energy in the country and the world;
- (b) whether the developed countries have stopped installing any atomic power plants and if so, the reasons therefor; and
- (c) whether India is being treated as one of the most desired destinations for the nuclear suppliers, and if so, the details thereof and the reaction of the Government thereto?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) : As per the information available with Central Electricity Authority (CEA), the All India Weighted Average Rate of Sale of Power (WARSP) for the year 2015-16 from hydro, thermal and nuclear sources are given at Annex.

Power from Renewable Energy sources is mainly procured through Competitive Bidding. The prices discovered through competitive bidding have come down substantially during past few years. The lowest power tariff recently discovered for solar was Rs. 2.44/kWh at Bhadla solar park and lowest tariff for wind at recent auction conducted in the month of Oct 2017 was Rs. 2.64/kWh.

The price of electricity in different countries from various sources of energy largely depends on their Generation mix, availability of energy resources and their internal market structure. The data regarding per unit cost of electricity from various sources of energy in the world is not available.

(b) : As per the information received from Department of atomic Energy, at present, there are 449 reactors in operations and 56 reactors are under construction in the world across 16 countries. Of these, UAE, Belarus and Bangladesh are the new entrants in nuclear power.

(c) : India is recognised as a country with advanced nuclear technologies. It has a robust indigenous nuclear power programme and plans for expansion based on both indigenous technologies and with foreign cooperation. India also has a domestic nuclear industrial base. India is, therefore, a desirable destination for Global nuclear suppliers, as cooperation with Indian nuclear industry would be mutually beneficial.

ANNEX

ANNEX REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 4484 ANSWERED IN THE LOK SABHA ON 22.03.2018

Weighted Average Rate of Sale of Power (WARSP) for the year 2015-16 for Different Modes of Generation/Category

Sl. No.	Mode of Generation/Category	WARSP (Paise/kwh) 2015-16
1	Hydro	291.03
2	Thermal	340.39
3	Nuclear	272.60
4	All Category	332.99

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4494
ANSWERED ON 22.03.2018

ACCIDENT IN NTPC PLANT IN RAEBAREILY

4494. SHRI JITENDRA CHAUDHURY:

Will the Minister of POWER
be pleased to state:

- (a) the number of persons died in the blast that took place in NTPC's Unchahar plant in Raebareli;
- (b) the officials/workers who were responsible for this accident;
- (c) the main cause of this accident; and
- (d) the action taken by the Government in this regard?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) : A total of 45 persons died in the accident that took place in NTPC's Unchahar power plant in Raebareli.

(b) to (d) : To investigate the causes of the accident, Ministry of Power, Government of India in exercise of powers conferred under section 161(2) of the Electricity Act, 2003, constituted a Committee chaired by Member (Thermal), Central Electricity Authority. A report has been submitted by the Committee, which has inter-alia mentioned high ash build up and consequent tube failure due to dislodging of this build up ash in the boiler, as one of the causes of the accident. The report is under examination in the Ministry of Power.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4496
ANSWERED ON 22.03.2018

GRATUITOUS LOAD SHEDDING

4496. SHRI B. VINOD KUMAR:

Will the Minister of POWER
be pleased to state:

- (a) the details on the number of cases of gratuitous load shedding by discoms when there wasn't a technical glitch involved during the last five years;
- (b) whether the Government is taking any measures to prevent such load shedding to ensure uninterrupted service to the consumers in the near future; and
- (c) if so, the details thereof?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a): The supply of electricity to various consumers falls under the purview of the respective distribution licensee and it is the responsibility of distribution licensees to provide reliable & quality power supply to all the consumers in their area of operation. Respective State Electricity Regulatory Commissions (SERCs) monitor the performance of the utilities and have also notified standard of performance for monitoring the performance of Power Distribution Companies (DISCOMs).

Details of load shedding by DISCOMs are not monitored by Central Electricity Authority.

(b) & (c) : State Governments and Government of Union Territories have agreed to provide 24x7 power supply for all from 1st April, 2019. Government of India supports them, through different schemes including, Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Ujwal DISCOM Assurance Yojana (UDAY), Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) and Integrated Power Development Scheme (IPDS).

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4511
ANSWERED ON 22.03.2018

FINANCIAL ASSISTANCE TO SEBS

4511. SHRI JYOTIRADITYA M. SCINDIA:
SHRI GAURAV GOGOI:

Will the Minister of POWER
be pleased to state:

- (a) whether Power Finance Corporation has sanctioned financial assistance to some of the States and/or to some of the State Electricity Boards to strengthen the infrastructure in power sector during the last three years and the current financial year;
- (b) if so, the details of the financial assistance provided by Power Finance Corporation to each State or State Electricity Board during the period with conditions, if any; and
- (c) the present status of each of the State Electricity Board in strengthening the infrastructure in power generation and distribution?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) & (b) : Power Finance Corporation (PFC) has sanctioned an amount of Rs.1,77,212 crores as financial assistance to State Power Utilities for strengthening of Infrastructure during the last three years and in the current year. The State wise details of the same are furnished in Annexure-I. Conditions of financing depends upon financial viability and eligibility criteria.

(c) : State-wise details of Transmission lines in Circuit Kilometers (CKM), Transformation capacity through Sub-stations in Mega Volt Amperes (MVA) and Generation capacity in Mega Watts (MW) supported by PFC funding to state sector utilities for strengthening infrastructure during the last 3 years and the current year are furnished in Annexure-II.

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 4511 ANSWERED IN THE LOK SABHA ON 22.03.2018.

State-wise details of amount sanctioned by PFC to state sector utilities during the last 3 years and the current year

Rs. In crores

Sl. No.	Name of State	Amount Sanctioned (01.04.2014 to 31.12.2017)
1	ANDHRA PRADESH	16,173
2	BIHAR	2,713
3	CHHATTISGARH	4,632
4	DELHI	700
5	GUJARAT	13
6	HARYANA	2,465
7	HIMACHAL PRADESH	778
8	JAMMU & KASHMIR	200
9	KARNATAKA	2,035
10	KERALA	1,393
11	MADHYA PRADESH	6,163
12	MAHARASHTRA	8,291
13	MEGHALAYA	935
14	PUDUCHERRY	28
15	PUNJAB	7,648
16	RAJASTHAN	26,034
17	SIKKIM	1,856
18	TAMIL NADU	37,598
19	TELANGANA	18,308
20	UTTAR PRADESH	31,162
21	UTTARAKHAND	1,216
22	WEST BENGAL	6,871
	Total	1,77,212

ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 4511 ANSWERED IN THE LOK SABHA ON 22.03.2018.

State-wise details of Transmission lines (CKM), Sub-stations (MVA), and Generation capacity (MW) supported by PFC funding to state sector utilities for strengthening infrastructure during the last 3 years and the current year

	STATE	MVA	CKM	MW
1	ANDHRA PRADESH	1,626	220	3,005
2	BIHAR	5,871	20,977	1,000
3	CHHATTISGARH	7,716	26,714	1,000
4	HARYANA	2,942	13,260	800
5	HIMACHAL PRADESH	320	7	100
6	JHARKHAND	-	-	1,000
7	KARNATAKA	107	3,748	-
8	MADHYA PRADESH	-	10,018	-
9	MAHARASHTRA	4,979	706	-
10	MEGHALAYA	-	-	166
11	PUNJAB	623	20	-
12	PUDUCHERRY	50	-	-
13	RAJASTHAN	2,843	10,555	120
14	SIKKIM	-	24	-
15	TAMIL NADU	8,626	2,999	5,120
16	TRIPURA	-	656	-
17	TELANGANA	11,123	2,327	1,880
18	UTTAR PRADESH	17,256	64,128	5,280
19	UTTARAKHAND	1,055	249	100
20	WEST BENGAL	1,030	422	1,660
	Total	66,167	157,030	21,231

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4516
ANSWERED ON 22.03.2018

GENERATION AND SELLING PRICE OF POWER

4516. SHRI P.R. SUNDARAM:
SHRIMATI SUPRIYA SULE:
SHRI SATAV RAJEEV:
SHRI DHANANJAY MAHADIK:
SHRI MOHITE PATIL VIJAYSINH SHANKARRAO:

Will the Minister of POWER
be pleased to state:

- (a) whether there is a huge difference in the power generation cost and its maximum selling price to the consumers in the country, if so, the details thereof and the reasons therefor;
- (b) the corrective steps taken by the Government in this regard;
- (c) the estimated average power generation cost during the last three years and the minimum and the maximum price of power sold to the consumers during the above said period;
- (d) whether the Government has decided that power producers who do not sell electricity at regulated tariffs will not get gas supply and if so, the details thereof; and
- (e) the steps taken/proposed to be taken by the Government in this regard?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) to (c) : As per the available information in Central Electricity Authority (CEA), the average power generation cost & average cost of supply of Distribution Companies during the last three years is as follows:

	2013-14	2014-15	2015-16
Average generation cost (Rs/kWh)	3.45	3.67	4.43
Average cost of supply of Distribution companies (Rs/kWh)	5.19	5.21	5.43

In addition to the generation tariff, the cost of supply to the end consumers includes the transmission charges, transmission losses, distribution network charges, distribution losses and commercial losses etc. The maximum and minimum price of power sold to consumers during the last three years is as follows:

Financial Year	Maximum Price (Rs./kWh)	Minimum Price (Rs./kWh)
2013-14	6.26	2.75
2014-15	7.19	1.90
2015-16	7.09	1.97

Through appropriate policy framework and programmes, the Government is promoting efficiency in generation, transmission and distribution and also supporting strengthening of the distribution and transmission infrastructure for reducing technical losses. These measures, along with the policy framework of discovery of tariff through competitive bidding will contribute towards lowering of tariff rates. The Tariff Policy notified by Central Government also provides for emphasis on reduction in Aggregate Technical & Commercial (AT&C) losses and theft to reduce the operating costs of Discoms.

(d) & (e) : Domestic natural gas is allocated as per the prevailing gas allocation policy and supplied depending upon the availability. The Liquefied Natural Gas (LNG) is imported under open general license on terms and conditions mutually agreed upon between the buyers and sellers and also by gas based power plants.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4526
ANSWERED ON 22.03.2018

RURAL ELECTRIFICATION SCHEME

†4526. SHRI HARI MANJHI:
SHRI SUNIL KUMAR SINGH:

Will the Minister of POWER
be pleased to state:

- (a) whether the Government is aware that the electrification works of number of villages have not been completed as on date and if so, the number of such villages, State-wise and district-wise including Chatra, Latehar and Palamu districts of Jharkhand;
- (b) the number of villages electrified in the country during the last two years, State-wise;
- (c) whether the Government has set any target for electrifying all villages under the rural electrification scheme;
- (d) if so, the details thereof and the time by which this target is likely to be achieved; and
- (e) the number of cities/towns and villages where 24 hours power supply is being provided, State/UT-wise?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) to (d) : As reported by the States, there were 18,452 un-electrified census villages in the country as on 01.04.2015. The State-wise and district-wise details of remaining un-electrified villages, as on 28.02.2018, are given at Annexure-I. All the remaining un-electrified villages are targeted to be electrified by 1st May, 2018.

Similarly, as informed by the Government of Jharkhand, there were 2525 un-electrified census villages in the State, including Chatra, Latehar and Palamu districts. Of these no village remains for electrification.

The State-wise number of villages electrified across the country during the last two years, is given at Annexure-II.

(e) : Electricity is a concurrent subject. Supply and distribution of electricity in a State/UT including city/towns is within the purview of the respective State Government/State Power Utility. The Government of India supplements the efforts of the State Governments by establishing power plants in Central Sector through Central Power Sector Undertakings (CPSUs) and allocating power to the States from these plants of CPSUs. As per latest data reported by the States, 18 States have more than 20 hours a day rural household power supply.

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (d) OF UNSTARRED QUESTION NO. 4526 ANSWERED IN THE LOK SABHA ON 22.03.2018.

State-wise and district-wise details of balance un-electrified villages as on 28.02.2018
(Out of 18452 un-electrified villages reported by States as on 01.04.2015)

Sl. No.	State	District	un-electrified villages
1	Arunachal Pradesh	Anjaw	21
		Changlang	11
		Dibang Valley	26
		East Kameng	97
		East Siang	4
		Kurung Kumey	146
		Lohit	2
		Lower Dibang Valley	93
		Lower Subansiri	96
		Papum Pare	37
		Tawang	2
		Tirap	5
		Upper Siang	12
		Upper Subansiri	82
		West Kameng	2
West Siang	35		
2	Chhattisgarh	Bijapur	23
		Dantewada	4
		Narayanpur	1
		Sukma	67
3	Jammu & Kashmir	Bandipore	11
		Kargil	8
		Kishtwar	41
		Kupwara	11
		Leh(Ladakh)	10
		Rajouri	1
		Reasi	4
4	Madhya Pradesh	Damoh	8
		Katni	4
		Sagar	2
		Umaria	7
5	Manipur	Chandel	2
		Churachandpur	1
		Tamenglong	1
6	Mizoram	Lawngtlai	1
		Mamit	1
7	Odisha	Gajapati	1
		Kandhamal	1
		Malkangiri	2
		Rayagada	3
8	Uttarakhand	Pithoragarh	3
		Tehri Garhwal	1
		Uttarkashi	18
Total			908

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (d) OF UNSTARRED QUESTION NO. 4526 ANSWERED IN THE LOK SABHA ON 22.03.2018.

State-wise number of villages electrified during the last two years

Sl. No.	State	2015-16	2016-17
1	Arunachal Pradesh	174	175
2	Assam	942	1,218
3	Bihar	1,754	556
4	Chhattisgarh	405	294
5	Himachal Pradesh	1	27
6	J & K	27	5
7	Jharkhand	750	1,104
8	Karnataka	-	14
9	Madhya Pradesh	214	159
10	Manipur	75	121
11	Meghalaya	1	681
12	Mizoram	16	24
13	Nagaland	-	76
14	Odisha	1,264	1,092
15	Rajasthan	163	263
16	Tripura	9	17
17	Uttar Pradesh	1,305	162
18	Uttarakhand	-	18
19	West Bengal	8	9
Total		7,108	6,015

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4568
ANSWERED ON 22.03.2018

TRANSITION TO ELECTRIC VEHICLES

4568. SHRI MALYADRI SRIRAM:

Will the Minister of POWER
be pleased to state:

- (a) the details of the measures taken by the Government to facilitate transition to Electric Vehicles by 2030, especially in relation to building AC (Alternate Current) and DC (Direct Current) electric vehicles charging infrastructures and systems for appropriate treatment and disposal of end-of-life batteries;
- (b) whether the Government proposes to alter the entire fleet of public transportation system including the buses and auto-rickshaws to an electric fleet;
- (c) if so, the details thereof;
- (d) whether DC chargers can fully charge an electric vehicle in 45 to 60 minutes and the AC chargers take 6 to 7 hours; and
- (e) if so, the details thereof?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) : Ministry of Power has set up the following committees to address the issues and draw a roadmap for setting up charging infrastructure:

- 1) Committee on Technical Aspects of Charging Infrastructure for Electric Vehicles.
- 2) Committee on Policy, Planning and Regulatory/Tariff related issues

(b) & (c) : No, Madam.

(d) & (e) : The charging time of AC/DC charger depends upon capacity and type of battery in the Electric Vehicle and the capacity of the charger.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4570
ANSWERED ON 22.03.2018

ELECTRICITY CONNECTIONS

†4570. SHRI PANKAJ CHAUDHARY:

Will the Minister of POWER
be pleased to state:

- (a) whether the Government proposes to spend Rs.16000 crore to provide four crore power connections;
- (b) if so, whether the Government proposes to execute this work through State Governments and if so, the details thereof;
- (c) whether the execution of this work through State Governments is likely to result in slow pace of implementation of the scheme; and
- (d) if so, whether the Government proposes to execute the said work under its supervision to provide domestic power connections on time and to utilize the funds properly?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) to (d) : Government of India has launched Pradhan Mantri Sahaj Bijli Har Ghar Yojana - Saubhagya, in September, 2017 with an outlay of Rs.16,320 crore including a Gross Budgetary Support (GBS) of Rs.12,320.00 crore. The objective of the scheme is to provide last mile connectivity and electricity connections to all households in rural and all poor households in urban areas.

The household electrification under Saubhagya is executed by the respective States/DISCOMs/Power Department on turn-key or partial turnkey or departmental basis, as per the guidelines issued.

Under the scheme, remaining un-electrified households are targeted to be electrified by 31st March, 2019. To achieve the aforesaid target, a robust monitoring mechanism is in place at District, State and Central level. Web based monitoring mechanism has been deployed for monitoring the progress of un-electrified households and the information is made available in public domain. Further, an additional grant of 15% (5% for special category states) of the project cost is available to the States on timely completion of household electrification works.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4583
ANSWERED ON 22.03.2018

POWER FOR ALL SCHEME

†4583. SHRI SHRIRANG APPA BARNE:
DR. PRITAM GOPINATH MUNDE:
SHRI ADHALRAO PATIL SHIVAJIRAO:
SHRI DHARMENDRA YADAV:

Will the Minister of POWER
be pleased to state:

- (a) whether the Union Governments' "Power for All" scheme promises continuous and uninterrupted power to all households and industries by March 2019;
- (b) if so, the details thereof and the extent to which it has been achieved so far;
- (c) whether the country is about to face substantial increase in energy demand in the next few years, which will translate into higher demand for electricity, if so, the facts thereof;
- (d) the extent to which the country's power sector is capable to meet the increased demand for electricity and the manner in which the shortfall is likely to be met; and
- (e) whether the power sector in the country has undergone a plethora of reforms in the recent past, if so, the details thereof and the outcome achieved through these reforms?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) & (b) : Electricity is a concurrent subject. Supply of electricity comes in the jurisdiction of State Government/Discoms/Power Utility. However, in order to enable continuous electricity supply, Government of India has taken up a joint initiative with all States/UTs for preparation of State specific documents for providing 24x7 power supply to all and adequate supply of power to agricultural consumers as per State policy. 24x7 Power for All document has been signed with all the States/UTs.

Government of India supplements the efforts of States with schemes such as Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS) and Ujwal DISCOM Assurance Yojana (UDAY) to help them to achieve the objective of providing uninterrupted power supply to every households.

(c) : As per 19th Electric Power Survey (EPS) Report brought out by Central Electricity Authority in consultation with States & UTs, the projected energy requirement and peak electricity demand (utilities) for the years 2018-19 to 2021-22 is given below:

Year	Electrical Energy Requirement (BU)	Peak Electricity Demand
		in GW
2017-18 (Actual)	1100	164
2018-19	1318	188
2019-20	1400	201
2020-21	1483	213
2021-22	1566	226

(d) : Conventional capacity comprising of 48 GW of Thermal, 6.8 GW Hydro and 3.3 GW Nuclear are at various stages of construction and likely to yield benefits during the period 2017-2022. Government of India has set a target to have 175 GW of Installed Capacity from Renewable Energy Sources (RES) by 2021-22. Considering these additional capacity to be available, it is inferred that adequate electricity generation would be there to meet the demand during the period 2018-22.

(e) : The initiatives taken by the Ministry of Power in respect of Reforms in Power Sector are given at Annexure.

ANNEXURE REFERRED TO IN REPLY TO PART (e) OF UNSTARRED QUESTION NO. 4583 ANSWERED IN THE LOK SABHA ON 22.03.2018.

The Government of India has taken various initiatives for reforms in power sector. These includes, inter-alia, the following:

I. The Government of India has taken several steps to promote energy conservation, energy efficiency and other demand side management measures.

II. Central Government has notified the Revised Tariff Policy on 28.1.2016 with the objective to ensure Electricity for all, Efficiency to ensure affordable tariffs, Environment for a sustainable future and Ease of doing business to attract investments and ensure financial viability.

III. In order to bring uniformity and transparency in power procurement by the DISCOMs and to promote competition in electricity sector, a web portal for e-Bidding i.e. "DEEP (Discovery of Efficient Electricity Price) Portal" was launched on 12th April, 2016 for e-Bidding for short term and medium term power procurement requirements and use of flexibility in utilization of coal in IPP Stations.

IV. The Government on 31st March, 2016 has launched a Mob App 'Vidyut PRAVAH' on Electricity Pricing and Availability Highlights. The application provides highlights of the power availability in the country on real time basis. This app will empower common people to demand 24X7 power from the states and will take transparency to the next level by making State governments more accountable.

V. Development of web portal and launch of mobile application named 'MERIT' (Merit Order Dispatch of Electricity for Rejuvenation of Income and Transparency) on 23rd June, 2017 which displays information regarding the merit order of Electricity procured by State(s).

VI. The government on 4th May, 2016 has notified the "Flexibility in utilization of domestic coal for reducing the cost of power generation". The State can use their coal and take equivalent power from any other efficient generating stations at a cheaper cost as compared to the cost of generation from their own power stations.

VII. Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Power Projects issued vide Resolution dated 3rd August, 2017.

VIII. Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Wind Power Projects issued vide Resolution dated 8th December, 2017.

GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4594
ANSWERED ON 22.03.2018

SHORTAGE OF WATER FOR POWER PLANTS

4594. SHRI V. ELUMALAI:
SHRI JOSE K. MANI:
SHRI RAM CHARITRA NISHAD:

Will the Minister of POWER
be pleased to state:

- (a) whether it is a fact that the country's thermal power plants, about 90% of which rely on fresh water for cooling, are facing serious outages because of shortage for water, if so, the details thereof;
- (b) whether it is also true that between 2013 and 2016, 14 of country's 20 largest thermal utility companies experienced one or more shutdowns due to water shortage, if so, the details thereof;
- (c) whether it is also true that this cost the power producers more than Rs. 91 billion in potential revenue from the sale of power, if so, the details thereof;
- (d) whether water scarcity is set to worsen as India's thermal power sector expands and demand for water from other sectors increases, if so, the details thereof;
- (e) whether by 2030, 70% of country's thermal power plants are likely to experience increased competition for water from agriculture, industry and municipalities, if so, the details thereof and the steps taken/proposed to be taken up by the Government in this regard;
- (f) whether the Government has recently mandated limits for specific water consumption at thermal power plants, if so, the details thereof; and
- (g) whether the Government plans any policy incentives to encourage water conservation, water efficiency across the power sector, if so, the details thereof?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND
NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) & (b): No, Madam. The total Outage Losses due to water shortage reported by the stations in the current year, upto February, 2018, are about 3400 Million Units (MU), which is about 0.38% of total coal/lignite based generation during the period.

Losses due to water shortage reported by the Thermal Stations during 2013-14 to 2016-17 are as follows:

S.No.	Year	Losses in MU
1	2013-14	4375.8
2	2014-15	1155.9
3	2015-16	995
4	2016-17	9565.2

Details of the Outage of Thermal Generating Plants due to water shortage for the last four years are furnished at Annexure.

(c) : Information in this regard is not maintained in Central Electricity Authority/Ministry of Power. However, it is informed that the outage of a thermal power plant due to shortage of water will cause loss of revenue in terms of variable charge as well as loss of fixed charge if the plant availability falls below the normative value.

(d) to (e) : As per the Central Water Commission guidelines issued in November, 2014, for Improving Water Use Efficiency in Irrigation, Domestic & Industrial Sectors, the National Commission for Integrated Water Resources Development (NCIWRD) estimated water utilization in power development as only 3% out of the total withdrawal/ utilization for 2010 for all types of uses.

The Government has taken following steps to encourage water conservation, water efficiency across the power sector:

- I. Ash water recirculation system- Water from ash pond is recovered and reused in the system.
- II. Dry fly ash handling system & High concentration slurry disposal system (HCSD)- These ash handling techniques reduce the ash handling water requirement thereby reducing the water consumption.
- III. Zero water discharge system - Treating the total waste water produced in the plant and recycling back in to the consumptive water system reduces water consumption.
- IV. Operating cooling towers at higher Cycle of Concentration (COC). This reduces the waste water generated by the plant. This waste water generated is used for low grade applications like ash handling, coal dust suppression and gardening etc.
- V. Most of inland thermal power plants use closed cycle cooling water system with Cooling Tower and high level of COC to recirculate the water in operation for reducing the water requirement.

(f) : Ministry of Environment, Forest & Climate Change (MOEF&CC) has notified Environment (Protection) Amendment Rules, 2015 on 7th December 2015 related to water consumption limit for existing and future thermal power plants:

- (i) All plants with Once-Through-Cooling (OTC) shall install Cooling Tower (CT) and achieve specific water consumption upto a maximum of 3.5 m³/MWh within a period of two years from the date of publication of this notification.
- (ii) All existing Cooling Tower based plants to reduce specific water consumption up to a maximum of 3.5m³/MWh within a period of two years from the date of publication of this notification.
- (iii) New plants to be installed after 1st January, 2017 shall have to meet specific water consumption upto a maximum of 2.5m³/MWh and achieve zero waste water discharge.

(g) : The Tariff Policy, 2016 mandates the thermal Power Plants for use of treated sewage water from Sewage Treatment Plants (STP) of Municipality / local bodies, that are located within 50 km radius. All Thermal Power Plants have been advised to use STP water for cooling purpose, wherever possible.

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 4594 ANSWERED IN THE LOK SABHA ON 22.03.2018.

DETAILS OF OUTAGE OF THERMAL GENERATING PLANTS DUE TO WATER SHORTAGE OF LAST FOUR YEARS

ORGANIZATION	STATION	LOSS IN 2013-14 (in MU)	LOSS IN 2014-15 (in MU)	LOSS IN 2015-16 (in MU)	LOSS IN 2016-17 (in MU)
MAHAGENCO	PARLI TPS	3889.6	1032.8	0.0	3931.5
RRVUNL	GIRAL TPS	28.6	0.0	0.0	0.0
APL	TIRORA TPS	80.5	0.0	0.0	2375.1
UPRVUNL	HARDUAGANJ TPS	29.0	0.0	0.0	0.0
SEL	STERLITE TPP	292.9	0.0	0.0	1122.3
MPPGCL	SATPURA TPS	32.8	0.0	0.0	0.0
TNGDCL	NORTH CHENNAI TPS	22.2	20.9	0.0	16.2
BEPL	UTRAULA TPS	0.1	0.4	0.0	0.0
EPGL	SALAYA TPP	0.0	6.1	100.8	50.9
NTPC Ltd.	RIHAND STPS	0.0	91.6	0.0	0.0
SCPL	RATIJA TPS	0.0	4.1		46.5
NTPC LTD.	BARH II	0.0	0.0	17.4	0.0
ACB	KASAIPALLI TPP	0.0	0.0	6.6	0.0
KPCL	RAICHUR TPS	0.0	0.0	130.5	0.0
GSECL	SIKKA REP. TPS	0.0	0.0	23.0	0.0
NTPL	TUTICORIN (JV) TPP	0.0	0.0	2.0	0.0
UPCL	UDUPI TPP	0.0	0.0	672.2	0.0
HNPC	VIZAG TPP	0.0	0.0	42.4	0.0
KPCL	BELLARY TPS	0.0	0.0	0.0	77.9
NTPC Ltd.	FARAKKA STPS	0.0	0.0	0.0	339.8
GMR ENERG	GMR WARORA TPS	0.0	0.0	0.0	611.0
SVPL	SVPL TPP	0.0	0.0	0.0	58.6
TSPL	TALWANDI SABO TPP	0.0	0.0	0.0	666.3
TNGDL	TUTICORIN TPS	0.0	0.0	0.0	269.0
GRAND TOTAL		4375.8	1155.9	995.0	9565.2
