

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
STARRED QUESTION NO.224
ANSWERED ON 21.03.2023

POWER BACK-UP STORAGE FACILITY

224 # DR. ANIL JAIN:

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

- (a) the details of the plan by the Ministry for power back-up storage;
- (b) the States in which power back-up storage facility is presently available; and
- (c) the further plans of the Ministry for power back-up storage?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

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

STATEMENT

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) IN RESPECT OF RAJYA SABHA STARRED QUESTION NO. 224 FOR REPLY ON 21.03.2023 REGARDING POWER BACK-UP STORAGE FACILITY ASKED BY DR. ANIL JAIN.

(a) to (c) : Energy Transition entails increasing presence of variable and intermittent Renewable Energy Sources (VREs) like solar and wind in the energy mix. The Energy Storage System (ESS) such as Battery Energy Storage Systems (BESS) and Pump Storage Plants (PSP) store energy for later use and, as a result, provide flexibility in managing the intermittency of Renewable Energy (RE) generation. The Central Electricity Authority (CEA) has projected a requirement of 236 Gigawatt Hours (GWh) of BESS and 27 Gigawatt (GW) of PSP by 2031-32 in the country.

The State/ UT-wise details of energy storage capacity are furnished at **Annexure**.

The Government has taken the following steps to promote Energy Storage System (ESS):

- i. As per Rule 18 of the Electricity (Amendment) Rules 2022, the Energy Storage System (ESS) are considered as a part of the power system as defined under clause (50) of Section 2 of the Electricity Act, 2003.
- ii. The Energy Storage System has been included in the Harmonized Master List of Infrastructure (in the year 2022) to promote financing of projects.
- iii. In the year 2022, Ministry of Power notified the Guidelines for Procurement and Utilization of Battery Energy Storage Systems, as part of Generation, Transmission and Distribution assets, along with Ancillary Services.
- iv. In the year 2022, Ministry of Power has issued the Renewable Purchase Obligation (RPO) and Energy Storage Obligation Trajectory till 2029-30.
- v. In the year 2022, the Solar Energy Corporation of India (SECI) has awarded a pilot project for development of 500 MW/1,000 MWh of standalone BESS in the country.
- vi. In the Union Budget of 2023-24, VGF scheme has been proposed to support the development of 4,000 MWh of BESS projects.
- vii. The Budget announcement also included formulation of a detailed framework for Pumped Storage Projects.

ANNEXURE

**ANNEXURE REFERRED TO IN PARTS (a) TO (c) OF THE STATEMENT LAID IN
RESPECT OF RAJYA SABHA STARRED QUESTION NO. 224 FOR REPLY ON
21.03.2023 REGARDING POWER BACK-UP STORAGE FACILITY**

State/ UT-wise details of ESS

Sl. No.	State	Installed Capacity (MW)		
		PSPs	BESS (Above 5 MW)	Total
1	Telangana	1,605.6	-	1,605.6
2	Gujarat	1,440	6	1,446
3	West Bengal	900	-	900
4	Maharashtra	400	-	400
5	Tamil Nadu	400	-	400
6	Andaman & Nicobar Islands	-	16	16
7	Delhi	-	10	10
	Total (in the country)	4,745.6	32	4,777.6

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.2390
ANSWERED ON 21.03.2023

ELECTRIFICATION UNDER DDUGJY IN PUNJAB

2390 SHRI VIKRAMJIT SINGH SAHNEY:

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

- (a) the details of the funds allocated and utilized under Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) for Punjab in the last three years, year-wise, and district-wise;
- (b) the number of villages which are not 100 per cent electrified yet in the State district-wise;
- (c) whether Government has conducted any study on irregular load shedding of electricity in the last three years, if so, the report thereof, year-wise and State-wise ;
- (d) if not, the reasons therefor; and
- (e) the number of schools, panchayats, hospitals and police stations still not 100 per cent electrified yet in the State, district-wise?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) : There was no upfront allocation of funds for any State/District under Deen Dayal Upadhyaya Gram Jyoti Yojana(DDUGJY). Funds were released for sanctioned projects in instalments based on the reported utilization of the funds released in the previous instalments and fulfilment of stipulated conditions. The details of funds allocated/disbursed and utilized under DDUGJY during the last three years for Punjab state are as under:

(Rs. In Crore)				
2019-20	2020-21	2021-22	Total grant released	Grant utilized
115	16	35	166	100%

(b) : As reported by the States, all the inhabited un-electrified villages as per census 2011 had been electrified by 28th April, 2018 across the country.

(c) & (d) : Electricity is a concurrent subject and providing 24x7 electricity to all the consumers is the primary responsibility of concerned State Governments/Power Distribution Companies (DISCOMs). Government of India has taken a joint initiative with all the States/UTs for drawing up of State specific plans 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.

.....2.

Interruptions in the supply of electricity is generally on account of constraints in distribution network, or financial constraints with some Distribution Companies not having the money to pay for power. Government of India has assisted the States through its schemes including Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS), Ujwal discom Assurance Yojana (UDAY) and Pradhan Mantri Sahaj Bijli Har Ghar Yojana – SAUBHAGYA.

As per the 11kV feeders data reported by States/Discoms on NPP, the Average hours of Power Supply in a Day (HH.hh) in rural & urban area at all India level during the last three years are as under:

Year	Rural (HH.hh)	Urban (HH.hh)
2019-20	20.8	23.7
2020-21	21.2	23.7
2021-22	20.5	23.7

The State-wise details of average hour of Power Supply in a day for rural and urban areas across the country are at **Annexure**.

(e) : State Government of Punjab has reported that all the inhabited un-electrified villages as per Census 2011 have been electrified. Ministry of Power does not maintain details about consumer level connections.

ANNEXURE REFERRED TO IN REPLY TO PARTS (c) & (d) OF UNSTARRED QUESTION NO. 2390 ANSWERED IN THE RAJYA SABHA ON 21.03.2023

State-wise average hours of Power Supply in a day for the last three years (HH.hh)

Sl. No.	State Name	2019-20		2020-21		2021-22	
		RURAL	URBAN	RURAL	URBAN	RURAL	URBAN
1	Andhra Pradesh	23.63	23.92	23.67	23.90	23.58	23.89
2	Arunachal Pradesh#*	0.00	0.00	0.00	22.73		22.73
3	Assam#	0.00	23.80	0.00	0.00		23.67
4	Bihar	21.85	23.13	21.88	23.38	20.34	23.55
5	Chhattisgarh	0.00	23.98	0.00	23.98	21.25	23.82
6	Delhi**	0.00	0.00	0.00	0.00		24.00
7	Goa*	0.00	22.75	0.00	23.73		23.78
8	Gujarat	23.12	23.95	23.73	23.95	23.50	23.96
9	Haryana	19.23	23.27	19.95	23.40	16.26	23.63
10	Himachal Pradesh	15.65	23.85	15.83	23.85	13.27	23.90
11	Jammu and Kashmir#*	-	-	-	21.98	-	22.28
12	Karnataka	17.22	23.83	19.18	23.85	17.56	23.59
13	Kerala	21.97	23.98	21.00	23.92	19.62	23.93
14	Madhya Pradesh	23.03	23.85	22.65	23.93	19.35	23.88
15	Maharashtra	20.45	23.97	20.97	23.98	23.17	23.99
16	Meghalaya#	0.00	23.98	0.00	23.93		23.93
17	Manipur#*	0.00	0.00	0.00	0.00		23.65
18	Mizoram#	0.00	23.67	0.00	23.80		23.87
19	Nagaland#*	0.00	23.50	0.00	22.73		23.45
20	Odisha*	20.02	23.65	21.27	23.85	23.22	23.65
21	Puducherry*	20.45	0.00	23.15	0.00	20.30	
22	Punjab	23.17	23.72	22.60	23.77	22.12	23.68
23	Rajasthan	21.30	23.88	21.37	23.98	21.29	23.89
24	Tamil Nadu	20.97	23.97	21.52	0.00	22.15	23.98
25	Telangana	22.22	23.92	22.15	23.92	21.94	23.93
26	Tripura*	19.55	0.00	19.55	23.98	19.93	23.90
27	Uttar Pradesh	17.03	23.57	16.43	23.75	15.99	23.42
28	Uttarakhand	21.67	23.40	21.97	23.65	21.57	23.62
29	West Bengal	23.07	23.97	23.07	23.98	23.48	23.82
	All India	20.8	23.7	21.2	23.7	20.53	23.78

Note 1: # Only Urban data is Available

Note 2: * States has not submitted data on NPP.

Note 3: States/UTs not present in the list are not mapped on NPP

Note 4: **Delhi has been on boarded on NPP in April 2021. So data for previous FYs is not available on NPP

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.2391
ANSWERED ON 21.03.2023

SAUBHAGYA SCHEME IN MADHYA PRADESH

2391 # DR. SUMER SINGH SOLANKI:

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

- (a) the region-wise details of urban electrification in Madhya Pradesh under “Pradhan Mantri Sahaj Bijli Har Ghar Yojana-SAUBHAGYA” during the last three years;
- (b) the details of rural electrification carried out in Madhya Pradesh under the said scheme in last three years; and
- (c) the amount of funds allocated, released and utilized under the above scheme in Madhya Pradesh, district-wise, during the above period?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) & (b) : The Government of India launched Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) in October, 2017 with the objective of achieving universal household electrification, by providing electricity connections to all un-electrified households in rural areas and all poor households in urban areas in the country. Since the launch of SAUBHAGYA, by 31.3.2019, Madhya Pradesh State had reported 100% electrification of all the willing un-electrified households in both urban and rural areas covering 19,84,264 households. District-wise details of rural and urban household electrification (as per SAUBHAGYA portal) in the State of Madhya Pradesh are at **Annexure**.

(c): There was no upfront allocation of funds for any State/District under SAUBHAGYA scheme. Funds were released for sanctioned projects in instalments based on the reported utilization of the funds released in the previous instalments and fulfilment of stipulated conditions. SAUBHAGYA scheme was sanctioned Discom-wise as a whole. The details of funds allocated, released and utilized under the SAUBHAGYA scheme in Madhya Pradesh during the last three years are as under:

(Rs in Crore)

2019-20	2020-21	2021-22	Total	Funds utilized
0	6	140	146	100%

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 2391 ANSWERED IN THE RAJYA SABHA ON 21.03.2023

District wise details of rural and urban households electrified in Madhya Pradesh since the launch of SAUBHAGYA (as per SAUBHAGYA Portal) from 11.10.2017 till 31.03.2019

Sr. No.	District	Rural households	Urban households	Household electrified (as per SAUBHAGYA portal)
1	Indore	10363	650	11013
2	Dhar	46222	830	47052
3	Ujjain	21531	1689	23220
4	Khargone (West Nimar)	51708	3683	55391
5	Dewas	29658	1049	30707
6	Alirajpur	32148	203	32351
7	Mandsaur	17893	1773	19666
8	Ratlam	25947	792	26739
9	Barwani	36243	352	36595
10	Khandwa (East Nimar)	22120	690	22810
11	Jhabua	48374	221	48595
12	Neemuch	9785	1140	10925
13	Burhanpur	9765	332	10097
14	Shajapur	15865	896	16761
15	Agar Malwa	11624	738	12362
16	Rewa	50233	2017	52250
17	Satna	38887	3938	42825
18	Sagar	47962	4114	52076
19	Balaghat	44512	455	44967
20	Katni	29474	47	29521
21	Seoni	33136	379	33515
22	Damoh	33365	850	34215
23	Chhatarpur	47354	2662	50016
24	Chhindwara	41702	273	41975
25	Jabalpur	39824	542	40366
26	Tikamgarh	26074	345	26419
27	Narsinghpur	30382	1218	31600
28	Mandla	34174	0	34174
29	Singrauli	47180	1749	48929
30	Sidhi	47568	310	47878
31	Shahdol	40465	1856	42321
32	Dindori	31877	134	32011
33	Panna	31391	984	32375
34	Anuppur	43200	1786	44986
35	Umaria	32295	33	32328
36	Bhopal	20482	1753	22235

37	Vidisha	49890	3641	53531
38	Raisen	49864	2595	52459
39	Rajgarh	67302	1390	68692
40	Hoshangabad	23846	651	24497
41	Harda	14381	0	14381
42	Sehore	24804	312	25116
43	Betul	38905	1155	40060
44	Gwalior	49666	606	50272
45	Guna	60363	652	61015
46	Bhind	99639	984	100623
47	Morena	84317	2449	86766
48	Sheopur	36779	686	37465
49	Shivpuri	87071	1047	88118
50	Datia	37870	1001	38871
51	Ashoknagar	20790	342	21132
Total		1926270	57994	1984264

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.2392
ANSWERED ON 21.03.2023

IMPORTED COAL FOR BLENDING IN POWER PLANTS

2392 SHRI JAWHAR SIRCAR:

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

- (a) whether it was absolutely essential to issue the order to utilise imported coal at 8 to 10 times higher cost to blend in thermal power plants;
- (b) the rise in power costs for using imported coal in thermal power plants and discoms in Financial Year 2023 and the costs estimated to be in Financial Year 2024;
- (c) the reasons as to why adequate stocks of domestic coal were not maintained and stored in the lean months; and
- (d) whether Government can ensure that there is no profiteering by or undue enrichment of certain private players in the business of imported coal and its transport or handling?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) to (d) : Blending of imported coal by power plants have been undertaken since year 2009. Post-Covid, the power demand increased rapidly while at the same time, there was less generation from imported coal based plants and there was some interruption in supply of coal from domestic coal companies due to heavy rains. As a result, the coal stocks at power plants depleted drastically from September, 2021 onwards. In Dec, 2021, Ministry of Power advised state GENCOs and IPPs to import coal @ 4% (by weight) and central GENCOs @ 10% (by weight) of their requirement during 2022-23. During the month of April, 2022 the coal consumption in the power plants grew by about 12% as compared to April, 2021 leading to depletion of coal stock in Domestic Coal Based (DCB) plants. In view of high demand and depletion of coal stock, Ministry advised States and IPPs in April, 2022 to import coal at 10% (by weight) on their requirements in order to maintain sufficient coal stock during the monsoon season.

The gap between daily coal consumption and daily arrival of domestic coal ranged from 2.21 Lakh Tonnes to 0.5 Lakh Tonnes between the month of April 2022 and January 2023. If there would have been no import for blending purpose, the coal stock available at DCB plants would have reduced to zero by September, 2022. The average depletion was about 1.6 lakh tonne/day during first half of FY 2022-23. Subsequently, with the coal stock showing sign of recovery, Ministry advised GENCOs on 01.08.2022 to take a decision regarding blending at their level taking into account overall supply and stock position (need based blending) with continuous monitoring of stock level.

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During 2022-23 (April, 22 to January, 2023), CIL has despatched 485.99 MT (provisional) coal to power sector as compared to 440.05 MT during same period last year, registering a growth of about 10%. However, due to increase in electricity demand, the increase in supply of coal was not commensurate with the domestic coal requirement of the thermal power plants. To build sufficient stock of coal at the domestic coal based, Ministry of Power vide letter dated 09.01.2023 directed Central, State Gencos and IPPs to take necessary action and plan to import coal through a transparent competitive procurement for blending at the rate of 6% by weight so as to have coal stocks at their power plants for smooth operations till September 2023.

As on 14.03.2023, the total coal stock at Thermal Power Plants in the country is 33.3 MT (Million Tonnes) which is only 49% of the Normative Stock Requirement.

The coal stocking norms of Central Electricity Authority mandates the power plants to maintain coal stock which varies from month to month basis. The stocking norms are 20 to 26 days in non-pithead plants and 12 to 17 days in pithead plants so as to ensure sufficient coal stock at power plants to meet demand.

The cost of generation of electricity is dependent upon the quantity of imported coal used and the price of 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.

As per the current import policy, coal is kept under Open General License (OGL) and consumers are free to import coal from the sources of their choice as per their contractual prices on payment of applicable duty. Generating Companies have been advised to procure coal through transparent competitive process.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.2393
ANSWERED ON 21.03.2023

UTILISATION OF HYDRO POWER POTENTIAL

2393 SHRI PRABHAKAR REDDY VEMIREDDY:

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

- (a) hydro power potential in the country, State-wise;
- (b) whether it is a fact that the country is utilizing only 15 per cent of country's hydro potential to generate power;
- (c) whether it is a fact that United States of America is utilizing 90 per cent and European Union is using 98 per cent of hydro potential for generating power;
- (d) if so, the reasons as to why India is lagging behind; and
- (e) the efforts being made by the Ministry to push in hydro power generation in the country, with particular reference to Andhra Pradesh?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) & (b): As per the Reassessment Study carried out by the Central Electricity Authority (CEA) during 1978-1987, the assessed hydro power potential in the country is about 145320 MW (for projects with capacity above 25 MW). Presently, 42104.6 MW (29%) out of 145320 MW has been developed and 15023.5 MW (10.3%) is under construction. The state wise hydro power potential and its status of development are attached at **Annexure**.

(c) : As per reports of International Hydropower Association (IHA), USA has developed more than 80% of its hydro power potential and EU has developed more than 70% of its hydro power potential.

(d) : The main challenges in development of hydroelectric potential in the country are remote location, unpredictable geology, natural calamities, environment and forest issues, Rehabilitation and Resettlement (R&R) issues, law & order issues and inter-state issues

(e) : The Government has undertaken a number of policy initiatives to enhance the hydro power generation in the country, including in Andhra Pradesh, which are, inter alia, as under:

- (i) Declaring Large Hydro Power (> 25 MW projects) as Renewable Energy source.
- (ii) Provision of Hydro Purchase Obligation (HPO) as a separate entity within Renewable Purchase Obligation (RPO).
- (iii) Notification of tariff rationalization measures to bring down hydro power tariff.
- (iv) Provision of budgetary support for cost of Enabling Infrastructure, i.e. roads/bridges and Flood Moderation.
- (v) Notification of a “Dispute Avoidance Mechanism” through 'Independent Engineer' and “Dispute Resolution Mechanism” through “Conciliation Committee of Independent Experts (CCIE)” to expeditiously and effectively address contractual disputes.
- (vi) Notification of guidelines to reduce the incidence of time and cost over-run in Hydro Power Projects
- (vii) Waiver of Inter State Transmission System (ISTS) charges on transmission of electricity generated from new Hydro Electric Projects

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 2393 ANSWERED IN THE RAJYA SABHA ON 21.03.2023

Status of Hydro Electric Power Potential and Development (above 25 MW, as on 28.02.23)

Region/ State	Identified Capacity (reassessment study)	Capacity in operation		Capacity under construction	
	(MW)	(MW)	%	(MW)	(%)
NORTHERN					
Jammu & Kashmir	11567	3360.0	29.0	3099.5	26.8
Ladakh	2046	89.0	4.3	0.0	0.0
Himachal Pradesh	18470	10263.0	55.6	2490.0	13.5
Punjab	971	1096.3	100.0	206.0	21.2
Haryana	64	0.0	0.0	0.0	0.0
Rajasthan	483	411.0	85.1	0.0	0.0
Uttarakhand	17998	3975.4	22.1	1571.0	8.7
Uttar Pradesh	664	501.6	75.5	0.0	0.0
Sub Total (NR)	52263	19696.3	37.7	7366.5	14.1
WESTERN					
Madhya Pradesh	1970	2235.0	100.0	400.0	20.3
Chhattisgarh	2202	120.0	5.4	0.0	0.0
Gujarat	590	550.0	100.0	0.0	0.0
Maharashtra	3314	2647.0	79.9	0.0	0.0
Goa	55	0.0	0.0	0.0	0.0
Sub total (WR)	8131	5552.0	68.3	400.0	4.9
SOUTHERN					
Andhra Pradesh	3261	1610.0	49.4	960.0	29.4
Telangana	1099	800.0	72.8	0.0	0.0
Karnataka	6459	3689.2	57.1	0.0	0.0
Kerala	3378	1864.2	55.2	140.0	4.1
Tamil Nadu	1693	1778.2	100.0	0.0	0.0
Sub Total (SR)	15890	9741.6	61.3	1100.0	6.9
EASTERN					
Jharkhand	582	210.0	36.1	0.0	0.0
Bihar	40	0.0	0.0	0.0	0.0
Odisha	2981	2154.6	72.3	0.0	0.0
West Bengal	2829	441.2	15.6	120.0	4.2
Sikkim	4248	2282.0	53.7	1037.0	24.4
Sub Total (ER)	10680	5087.8	47.6	1157.0	10.8
NORTH EASTERN					
Meghalaya	2298	322.0	14.0	0.0	0.0
Tripura	0	0.0	0.0	0.0	0.0
Manipur	1761	105.0	6.0	0.0	0.0
Assam	650	350.0	53.8	120.0	18.5
Nagaland	1452	75.0	5.2	0.0	0.0
Arunachal Pradesh	50064	1115.0	2.2	4880.0	9.7
Mizoram	2131	60.0	2.8	0.0	0.0
Sub Total (NER)	58356	2027.0	3.5	5000.0	8.6
ALL INDIA	145320	42104.6	29.0	15023.5	10.3

Note: In addition to above 8 Pumped Storage Projects (PSPs) having a capacity of 4745.6 MW are under operation and 4 PSPs having a capacity of 2780 MW are under construction.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.2394
ANSWERED ON 21.03.2023

INCREASED POWER DEMAND AMIDST HIGH TEMPERATURES

2394 SHRI MASTHAN RAO BEEDA:

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

- (a) whether any steps have been taken to meet the increased demand for power due to a record 203 days of heat-waves experienced in 2022;
- (b) if so, the details thereof, and if not, the reasons therefor;
- (c) whether Government plans to formulate any policy to tackle the recurring problem of power outages during summers; and
- (d) if so, the details thereof and if not, the reasons therefor?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) to (d) : Indian power system has already met a record power demand of 211.6 GW in June, 2022. During the current year 2023, the power demand is expected to be around 229 GW during the summer period. Following steps have been taken for meeting the increased demand for power:

- (i) Measures have been taken to ensure the availability of the generation capacity. The generators shall complete the maintenance work of their plants well before the period of high demand. No planned maintenance will be taken during the high demand period (say April & May, 2023).
- (ii) Monitoring and Coordination with Ministries of Coal and Railways, on a regular basis, for increase in the production and dispatch of coal as much as possible.
- (iii) All generators have been asked for timely import of Coal for blending purposes so that adequate coal stock is maintained in the plant.
- (iv) All captive coal blocks have been asked to maximize the coal production to supplement the coal supply from domestic coal companies (CIL and SCCL).
- (v) Additional arrangement for gas for running gas based stations has been planned from GAIL, during high power demand months.
- (vi) Imported Coal Based (ICB) plants have been issued statutory directions to stock coal and generate power during high demand period.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.2395
ANSWERED ON 21.03.2023

ELECTRIFIED VILLAGES

2395 SHRI K.R. SURESH REDDY:

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

- (a) whether Government plan to change the definition of an electrified village since a village can be deemed electrified even if up to 90 per cent of households in it do not have an electricity connection;
- (b) the number of electrified villages, State-wise; and
- (c) how many of these villages has 50 per cent or more households with electricity connections?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) to (c) : According to Rural Electrification Policy, 2006, a village is reported as electrified, if

- (i) basic infrastructure such as Distribution Transformer and Distribution Lines are provided in the inhabited locality as well as the locality inhabited by weaker sections of the society/hamlet where it exists;
- (ii) electricity is provided to public places like Schools, Panchayat Office, Health Centres, Dispensaries, Community Centres etc.; and
- (iii) the number of households electrified should be at least 10% of the total number of households in the village.

The above definition of village electrification had no relevance after the launch of Pradhan Mantri Sahaj Bijli Har Ghar Yojana-SAUBHAGYA in October, 2017. The scheme was launched with the objective of achieving universal household electrification for providing electricity connections to all willing un-electrified households in rural areas and all willing poor households in urban areas in the country by March, 2019. All the States had reported 100% household's electrification as on 31.03.2021. A total of 2.817 crore households were electrified since the launch of SAUBHAGYA, up to 31.03.2021. Thereafter, some States reported 11.84 lakh households remained to be electrified, against which States reported that 4.43 lakh households have been electrified. A total of 2.86 crore households have been electrified under the aegis of SAUBHAGYA including additional households in two tranches that were unwilling for electrification earlier but became willing later. State/UT-wise details of household electrification are at **Annexure-I**.

Government of India had launched Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) to connect every inhabited village with electricity, and to strengthen distribution system. All inhabited villages as per census, 2011 stood electrified as on 28th April, 2018 across the country. A total of 18,374 villages were electrified under this Scheme. As reported by the States, all the inhabited un-electrified villages as per Census, 2011 had been electrified by 28th April, 2018 across the country State/UT-wise details of village electrification under DDUGJY are at **Annexure-II**.

Both the schemes stand closed as on 31.03.2022.

While fresh arising of new households is a continuous process and electrification of such households is expected to be taken care of by the Distribution Utilities, the Government of India stands committed to help the States to electrify all the households which existed when SAUBHAGYA was sanctioned. In this respect, the Government of India recently issued guidelines for their electrification under the Revamped Distribution Sector Scheme (RDSS) and the States have been advised to pose their DPRs to the Ministry of Power in this regard.

ANNEXURE-I

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (c) OF UNSTARRED QUESTION NO. 2395 ANSWERED IN THE RAJYA SABHA ON 21.03.2023

State-wise details of electrification of households since launch of SAUBHAGYA Scheme / Additional Sanctions and Achievement under DDUGJY (status as on 31.03.2022)

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

*Electrified prior to SAUBHAGYA and not funded under SAUBHAGYA

ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (c) OF UNSTARRED QUESTION NO. 2395 ANSWERED IN THE RAJYA SABHA ON 21.03.2023

State/UT-wise details of village electrification under DDUGJY as on 28.04.2018

Sl. No.	State	No. Of un-electrified villages as per original target i.e. 01.04.2015	Additional villages identified for electrification subsequently	Total Un-electrified villages	Villages found un-inhabited/ grazing reserve	No. Of Villages Electrified		
						Grid	Off-Grid	Total
1	2	3	4	5 = (3)+(4)	6	7	8	9 = (7) + (8)
1	Arunachal Pr.	1578	77	1655	172*	928	555	1483
2	Assam	2892		2892	160**	2338	394	2732
3	Bihar	2747	267	3014	108	2699	207	2906
4	Chhattisgarh	1080		1080	2	605	473	1078
5	Himachal Pr.	35		35	7	28		28
6	J&K	134		134	5	75	54	129
7	Jharkhand	2525	120	2645	62	2335	248	2583
8	Karnataka	39		39		12	27	39
9	Madhya Pr.	472		472	50	389	33	422
10	Maharashtra		88	88	8	37	43	80
11	Manipur	276	95	371	5	267	99	366
12	Meghalaya	912	154	1066	15	969	82	1051
13	Mizoram	58		58	4	54		54
14	Nagaland	82		82	4	78		78
15	Odisha	3474	386	3860	579	2882	399	3281
16	Rajasthan	495		495	68	334	93	427
17	Tripura	26		26		26		26
18	Uttar Pr.	1529	22	1551	53	1467	31	1498
19	Uttarakhand	76	18	94	3	67	24	91
20	West Bengal	22		22		22		22
	Total	18452	1227	19679	1305	15612	2762	18374

Note: *No. of un-inhabited villages include 13 villages in grazing reserve

** No. of un-inhabited villages include 22 villages in grazing reserve

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.2396
ANSWERED ON 21.03.2023

**DECLARATION OF RAIGARH – PUGALUR –TRISSUR HVDC TRANSMISSION
SYSTEM AS ASSET OF NATIONAL IMPORTANCE**

2396 SHRI P. WILSON:

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

(a) the steps taken by the Ministry to declare Raigarh–Pugalur–Trissur±800 KV, HVDC transmission system as asset of national importance and to bill the tariff to be shared between the States;

(b) the details of the liquidity assistance provided to the DISCOM operating in Tamil Nadu; and

(c) if not, the reasons therefor?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) : The billing of transmission tariff is done as per CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020.

(b) & (c) : To alleviate the liquidity problems in the power sector, under the Aatma Nirbhar Bharat announcements, the Government announced a liquidity infusion package for the power sector, under which, the DISCOMs would be able to discharge their dues to the Central Public Sector Undertakings (CPSU) GENCOs & TRANSCO; Independent Power Producers (IPPs), and Renewable Energy (RE) GENCOs, by availing concessional loans from Power Finance Corporation Ltd. (PFC) and REC Ltd. (REC) against State Government Guarantee.

The Ministry of Power issued Guidelines to the States on 14th May, 2020, for availing the benefits of concessional loans from PFC and REC, and they have advised their loan scheme to the States on 16th May, 2020.

The details of loan sanctioned and disbursement made to TANGEDCO, Tamil Nadu, under Liquidity Infusion Scheme, are as under:

State	Discom	Loan sanctioned (Rs. in Cr.)			Disbursement made (Rs. in Cr.)		
		REC	PFC	Total	REC	PFC	Total
Tamil Nadu	TANGEDCO	17830	12400	30230	17060	9737	26,797

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.2397
ANSWERED ON 21.03.2023

POWER GENERATION IN JAMMU AND KASHMIR

2397 # DR. ANIL JAIN:

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

- (a) the total cost of the projects launched by the Ministry since the abrogation of Article 370 in Jammu and Kashmir;
- (b) the areas and the number of citizens of Jammu and Kashmir getting or likely to get benefits out of these projects; and
- (c) the quantum of electricity available in Jammu and Kashmir before the abrogation of Article 370 and its availability at present?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) : Two Hydro Electric Projects (above 25 MW) were approved/launched by the Ministry of Power in Jammu and Kashmir in last three years and both are currently under implementation. The details are as below:

Sl. No.	Name of Project	District	Capacity (MW)	River/ Basin	Investment approval date	Latest Cost (Rs. Crores)	Date of commissioning
1	Ratle (RHPCL/ NHPC)*	Kishtwar	850.00	Chenab/ Indus	11.02.2021	5281.94	May 2026
2.	Kwar (CVPPPL)	Kishtwar	540.00	Chenab/ Indus	11.05.2022	4526.12	Nov. 2026

* The project was earlier to be executed by Ratle Hydro Electric Project Private Limited. Urgently, the project is being executed by the Joint Venture of National Hydro Power Corporation (NHPC) (51%) and Jammu and Kashmir State Power Development Corporation Limited (JKSPDC) (49%)- Ratle Hydroelectric Power Corporation Limited.

(b): With the commissioning of the two Hydro Electric Projects, the additional capacity of 1390 MW will be available for consumption by the beneficiaries. Power Purchase Agreements for sale of power are yet to be signed for these projects.

(c) : Power supply position for the UT of Jammu and Kashmir & Ladakh is given below:

Month	UT of J&K and Ladakh
	Electricity Supplied (MU)
July, 2019	1,180
August, 2019	1,238
September, 2019	1,203
December, 2022	1,787
January, 2023	1,918
February, 2023 (*)	1,665

**Provisional*

Energy Requirement and Energy Supplied data show that availability of electricity has increased from 73.6% in July, 2019 to 99.7% in February, 2023.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.2398
ANSWERED ON 21.03.2023

CHANJU POWER PROJECT

2398 # MS. INDU BALA GOSWAMI:

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

- (a) the power generation capacity of hydro power capacity at Chanju-III and Chanju-IV hydropower project respectively in Chamba district megawatt wise;
- (b) the quantum of annual power generation from the said projects, in terms of power units; and
- (c) the quantum of revenue to be garnered by Government from the said power plants at Chanju?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) : The power generation capacity of Chanju-III Hydro Electric Project (HEP) will be 48 Megawatt (MW). There is no project in the name of Chanju-IV. However, Himachal Pradesh Power Corporation Limited (HPPCL) is implementing another HEP upstream of Chanju-III, namely Deothal Chanju HEP, with power generation capacity of 30 MW.

(b) : At present, Chanju-III HEP is under construction and Deothal Chanju HEP is under pre-construction stage. The design energy of these projects are 176.19 million units and 101.35 million units per year, respectively.

(c) : Expected annual revenue to the State Government of Himachal Pradesh has been reported (considering energy price of ₹ 4/- per unit) as ₹ 70.47 crore and ₹ 40.54 crore respectively.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.2399
ANSWERED ON 21.03.2023

INCENTIVES FOR PUMPED STORAGE HYDROPOWER PROJECTS

2399 # SHRI BRIJLAL:

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

- (a) whether Government proposes to provide incentives like tax exemption, hassle-free environmental clearance and land allotment at concessional rates to promote pumped storage hydropower projects in the country;
- (b) if so, the details thereof, and the steps taken, in this regard; and
- (c) whether Government has framed any draft guidelines regarding pumped storage projects (PSPs) and if so, the details thereof?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) to (c) : The Government has proposed draft guidelines to promote the development of Pumped Storage Projects (PSP) in the country. The draft guidelines are presently at consultation stage with the stakeholders.

The draft guidelines envisage the promotion of PSPs in the country with the proactive support of State Governments. Some of the features therein include formulating a transparent criteria for awarding project sites, no upfront premium for project allotment, market reforms for monetization of ancillary services provided by PSPs, reimbursement of SGST by the States to make PSPs viable, provision of Government land to the developers on annual lease rent basis, exemption of PSPs from free power obligation, rationalization of Environmental Clearances for off-river PSP sites and utilization of exhausted mines for development of PSPs.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.2400
ANSWERED ON 21.03.2023

HOUSES ELECTRIFIED UNDER SAUBHAGYA

2400 # SHRI RAJENDRA GEHLOT:

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

- (a) the total number of houses electrified under the Pradhan Mantri Sahaj Bijli Har Ghar Yojana - SAUBHAGYA in the country and the total number and percentage of the households electrified through the installation of solar energy systems under the said scheme;
- (b) the number of households electrified under SAUBHAGYA in the State of Rajasthan through installation of solar power systems, district-wise; and
- (c) the details of funds allocated/released and utilized in the State under SAUBHAGYA in the last 3 years and during the current financial year, year-wise and district-wise?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a): The Government of India launched Pradhan Mantri Sahaj Bijli Har Ghar Yojana – SAUBHAGYA in October, 2017 with the objective of achieving universal household electrification, by providing electricity connections to all un-electrified households in rural areas and all poor households in urban areas in the country. Under the aegis of SAUBHAGYA, as on 31.03.2019, all households were reported electrified by the States, except 18,734 households in Left Wing Extremists (LWE) affected areas of Chhattisgarh. Subsequently, seven States namely Assam, Chhattisgarh, Jharkhand, Karnataka, Manipur, Rajasthan and Uttar Pradesh had reported that around 19.09 lakh un-electrified households, identified before 31.03.2019, which were unwilling earlier but later expressed willingness to get electricity connection. This was also sanctioned. All these seven States had reported 100% households' electrification as on 31.03.2021. A total of 2.817 crore households were electrified, since the launch of SAUBHAGYA, up to 31.03.2021. Thereafter, some States reported 11.84 lakh households remained to be electrified, against which the States reported that 4.43 lakh households have been electrified. Accordingly, till date, a total 2.86 crore households have been electrified. Specifically, under SAUBHAGYA Scheme, the States reported that 4,70,415 number of households have been electrified, (which is 2.68% of the total households electrified) through installation of Solar Energy System. The scheme stands closed.

(b): The district-wise details of off-grid households electrified under SAUBHAGYA in the State of Rajasthan are furnished at **Annexure**.

(c): There was no upfront allocation of funds for any State/District under SAUBHAGYA scheme. Funds were released for sanctioned projects in instalments, based on the reported utilization of the funds released in the previous instalments and fulfilment of stipulated conditions. SAUBHAGYA scheme was sanctioned Discom-wise as a whole. The quantum of funds allocated/distributed and utilized under SAUBHAGYA during the last three years in Rajasthan State are as follows:

(Rs. in crore)

2019-20	2020-21	2021-22	Total Grant disbursed	Funds utilized
76	101	24	202	100%

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 2400 ANSWERED IN THE RAJYA SABHA ON 21.03.2023

Sl. No.	District	Number of off-grid households electrified (as per closure)
1	Ajmer	185
2	Banswara	30330
3	Bhilwara	495
4	Chittaurgarh	109
5	Pratapgarh	280
6	Rajsamand	724
7	Sikar	98
8	Udaipur	46645
9	Barmer	12273
10	Bikaner	3300
11	Churu	4287
12	Ganganagar	650
13	Hanumangarh	500
14	Jaisalmer	9543
15	Jalore	350
16	Jodhpur	2700
17	Pali	3774
18	Sirohi	7439
	Total	123682
