

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
STARRED QUESTION NO.97
ANSWERED ON 26.07.2022

POWER SUPPLY SHORTAGE IN THE COUNTRY

97 SHRI RAGHAV CHADHA:

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

- (a) whether Government is aware that there is a looming coal crisis and power shortage in the country;
- (b) if so, the details thereof;
- (c) the present situation and demand versus supply matrix of coal supplies in the country;
- (d) the steps taken by Government to overcome coal shortage; and
- (e) the instructions /suggestions made to the States to overcome coal shortage?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

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

STATEMENT

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (e) OF STARRED QUESTION NO.97 ANSWERED IN THE RAJYA SABHA ON 26.07.2022 REGARDING POWER SUPPLY SHORTAGE IN THE COUNTRY

(a) & (b): The coal stock available with the thermal power plants, including import, is monitored by Central Electricity Authority (CEA) on daily basis. As on 31.03.2022, the coal stock was 25.6 Million Tonnes (MT) and increased to 28.4 MT as on 15.07.2022, which is about 50% of the normative coal stock required to be maintained by the Thermal power plants (TPPs). The stock available as on 15.07.2022 is sufficient to run these power plants for an average of 10 days at 85% Plant load factor (PLF).

Further, during 2022-23 (Apr-June), against the requirement of 404.76 Billion Units (BU), the energy supplied was 400.65 BU. There was a shortage of 1% of energy requirement. Gap is generally on account of factors other than inadequacy of power availability in the country such as constraints in distribution network, financial constraints, commercial reasons, forced outage of generating units etc.

(c) : The month-wise details of coal receipt and coal consumption are provided as under:

Month	Receipt per day (TT/day)	Consumption per day (TT/day)	Gap between supply and demand (TT/day)
Apr-22	2108	2236	-127
May-22	2181	2126	55
Jun-22	2244	2154	90
July, 2022 (till 15th)	2067	1957	110

(d) & (e): Government has taken the following steps to overcome coal supplies' shortages:

- (i) An Inter-Ministerial Sub Group comprising of representatives from Ministry of Power, Ministry of Coal, Ministry of Railways, Central Electricity Authority (CEA), Coal India Limited (CIL) and Singareni Collieries Company Limited (SCCL) meet regularly to take various operational decisions to enhance supply of coal to thermal power plants as well as for meeting any contingent situations relating to Power Sector including to alleviate critical coal stock position in power plants.
- (ii) As per the decision taken in the meeting held under the Chairmanship of Cabinet Secretary on Augmentation of coal supply and power generation capacity, a Secretary level Inter Ministerial committee has been set up to ensure that the medium and long term requirements of coal are met. The IMC comprises of Chairman Railway Board, Secretary, Ministry of Coal, Secretary, Ministry of Environment, Forest and Climate Change as members and Secretary, Ministry of Power as convenor.

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- (iii) Considering high demand of domestic coal in the thermal power plants, Ministry of Power on 28.04.2022 issued advisory to State Sector and Independent Power Producer (IPP) plants to import coal for blending @10% of their requirement to ensure minimum required coal stock before the onset of monsoon, to ensure availability of adequate stock in the power plants which may cater to their demand during monsoon period when the domestic supply of coal reduces.
- (iv) CIL has allocated about 16 MT coal on Road cum Rail (RCR) mode to TPPs.
- (v) Railways has issued order to give preference to Power Sector for loading of coal from Good Shed Siding (GSS) and Private Washery (PW).
- (vi) Ministry of Power has advised States, from time to time, to lift coal offered by CIL on RCR mode and also achieve production target from their Captive mines.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
STARRED QUESTION NO.98
ANSWERED ON 26.07.2022

AVAILABILITY OF COAL IN POWER PLANTS

98 SHRI JAWHAR SIRCAR:

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

- (a) whether Government is aware that power plants did not maintain mandatory stockpiles of coal and that in April 2022, when the power crisis broke out, most of the plants had only around 10 per cent of the required stock; and
- (b) whether Government took strict actions to ensure coal stocks at plants on the lines of decision taken on 27th May, 2022 under the Electricity Act, to ensure 10 per cent mixing of imported coal, 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) & (b) : A Statement is laid on the Table of the House.

STATEMENT

STATEMENT REFERRED TO IN REPLY TO PARTS (a) & (b) OF STARRED QUESTION NO.98 ANSWERED IN THE RAJYA SABHA ON 26.07.2022 REGARDING AVAILABILITY OF COAL IN POWER PLANTS

(a) : Central Electricity Authority (CEA) issued coal stocking norms mandating Thermal Power Plants (TPPs) to maintain coal stock for 12 to 17 days for pithead plants and for 20 to 26 days for non-pithead plants based on its requirement at 85% Plant Load Factor (PLF) with seasonal variation in supply/consumption pattern. As per the norms, power plants have to maintain coal stock for 17 days in case of pithead plants and 26 days in case of non-pithead plants during the month of April, 2022.

As on 30.04.2022, the coal stock available was about 21.95 Million Tonnes (MT), which was about 33% of the normative stock requirement of 66.53 MT. Further, out of 173 number of TPPs with a capacity of about 2,03,347 MW, 50 plants with a capacity of 44,176 MW were having coal stock of less than 10% of normative stock requirement.

(b) : Ministry of Power (MoP) vide letter dated 28.04.2022 issued advisory to State Sector and Independent Power Producer (IPP) plants to import coal for blending @10% (by weight) of their requirement to ensure minimum required coal stock before the onset of monsoon. Central Gencos had also been instructed to take similar action. This decision was to ensure availability of adequate stock in the power plants which may cater to their demand during monsoon period when the domestic supply of coal reduces.

In this regard, various directions/orders have been issued by MoP which are as under:

- i. MoP vide letter dated 13th May, 2022 to all State Govts. and SERCs to ensure all generating companies regulated by them to take immediate action for import of coal for blending as per orders of MoP so that resource adequacy is ensured.
- ii. MoP vide letter dated 18th May, 2022 again advised Gencos to import coal to maintain generation and meet the power demand of the country.
- iii. MoP vide another letter dated 18th May, 2022 has also issued directions under Section 107 of the Electricity Act, 2003 to CERC with copy to SERCs/JERCs to take suitable action to allow blending with imported coal as per MoP instructions.
- iv. MoP vide letter dated 26th May, 2022 issued directions under Section 11 of the Electricity Act, 2003 giving a methodology to be used by the generating companies supplying power under Section 63 of the Electricity Act, 2003 and State Govts./Discoms to calculate the compensation due to blending with imported coal.

- v. MoP vide letter dated 28th May, 2022 again requested all State Gencos/IPPs to take necessary action and assess the remaining requirement of their blending with imported coal for the whole FY 2022-23 considering quantity already awarded and also separately indicate the requirements upto 30.09.2022.
- vi. An Inter-Ministerial Sub Group comprising of representatives from Ministry of Power, Ministry of Coal, Ministry of Railways, CEA, Coal India Limited (CIL) and Singareni Collieries Company Limited (SCCL) meet regularly to take various operational decisions to enhance supply of coal to thermal power plants as well as for meeting any contingent situations relating to Power Sector including to alleviate critical coal stock position in power plant.

Based on the performance of Generation Companies (GENCOS) to lift offered domestic coal and action taken on import for blending, Sub-Group in its meeting decides to allocate Railway rakes to GENCOs.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1108
ANSWERED ON 26.07.2022

DEVELOPMENT OF PUMPED STORAGE PROJECTS

**1108 SHRI SUJEET KUMAR:
DR. AMAR PATNAIK:**

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

- (a) whether Government is contemplating Viability Gap Funding for Pumped Storage Projects (PSPs);
- (b) if so, by when the guidelines will be issued in this regard along with the details thereof;
- (c) whether Government is formulating a set of guidelines for allocation of PSPs to the private sector on a nomination basis; and
- (d) if so, whether the States have been consulted in this regard?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) & (b) : A Scheme for viability gap funding for Battery Energy Storage Systems (BEEs) and Pump Storage Projects (PSP) is under consideration by the Government.

(c) : No, Sir.

(d) : Question does not arise.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1109
ANSWERED ON 26.07.2022

ELECTRICITY CONNECTIONS UNDER SAUBHAGYA SCHEME

1109 SMT. MAUSAM NOOR:

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

- (a) the total number of households which have been provided electricity connections under the Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) in West Bengal, district-wise in the previous quarter;
- (b) the bottlenecks faced and the measures proposed by Government in increasing the pace of implementation of SAUBHAGYA scheme in the rural areas of West Bengal; and
- (c) the time by which Government proposes to provide electricity connections to all rural households in West Bengal and also the projections for the upcoming quarter, July-September?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) to (c) : The Government of India launched the 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 willing un-electrified households in rural areas and all willing poor households in urban areas in the country. A total of 7,32,290 households were electrified in West Bengal since the launch of Saubhagya. The State of West Bengal has reported that 100% household electrification has been completed in the State. District-wise details of households electrified in the State of West Bengal are at **Annexure**.

The Steps that were taken by the Government to increase the pace of implementation of Saubhagya, including in West Bengal are as under:

- i. Launching of Saubhagya Strategy Formulation workshops in the States to give impetus to quick start the programme.
- ii. Establishing camps in villages/ cluster of villages wherein public representatives (MLAs, MPs, Gram Pradhan) helped create awareness amongst public at large.
- iii. Infrastructure Support- to the tune of Rs 14,270 Crore for electrification of households under Saubhagya and adequate funding provided to the States by Government of India.

- iv. 24x7 communication through 'One nation One number' toll-free help lines and special campaign 'Saubhagya Rath' helped create awareness along with various media options viz. print media, radio, television, social media (Facebook, twitter etc.).
- v. Flexibility to States in mode of implementation (Departmental/ Turnkey/ Semi-turnkey).
- vi. A comprehensive Web portal '*saubhagya.gov.in*' was developed and DISCOMs were provided access to update the progress on the portal to enable day-to-day monitoring.
- vii. Coordination with Indian Electrical & Electronics Manufacturers' Association (IEEMA) to ensure speedy supply of products and equipment.
- viii. Facilitated availability of adequate skilled manpower with requisite skill, through coordination with the Ministry of Skill Development and Entrepreneurship (MSDE) for effective training of the workforce.
- ix. More than 350 Engineers viz. Gram Vidyut Abhiyantas (GVAs) were deployed in the monitoring of projects under rural electrification schemes.
- x. Helicopters and support from the Indian Railways were instrumental in transporting essential goods to unexplored and in accessible geographies.
- xi. Monitoring & Reviews at all levels of the Government Centre States and Distribution utilities.

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (c) OF UNSTARRED QUESTION NO. 1109 ANSWERED IN THE RAJYA SABHA ON 26.07.2022

District-wise details of households electrified in West Bengal under Saubhagya

District	Number of households electrified
Bankura	24415
Bardhaman	65767
Birbhum	36859
Cooch Behar	35043
Dakhshin Dinajpur	6828
Darjiling	10434
Hooghly	41692
Howrah	27827
Jalpaiguri	17130
Maldah	32871
Murshidabad	54433
Nadia	51631
North 24 Parganas	61078
Paschim Medinipur	21901
Purba Medinipur	33407
Purulia	52234
South 24 Parganas	144401
Uttar Dinajpur	14339
Total	7,32,290

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1110
ANSWERED ON 26.07.2022

ELECTRICITY GENERATION FROM VARIOUS SOURCES

1110 DR. ASHOK KUMAR MITTAL:

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

- (a) the details of the percentage of electricity generated from various sources such as coal, hydel, thermal and renewable energy in the last three years;
- (b) whether use of electricity generated from coal increases pollution, if so, the details thereof;
- (c) whether Government is contemplating to take any step to minimize pollution; 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) : The details of the percentage of electricity generated from sources such as Thermal, Nuclear, Hydro and Renewable sources in the country during the last three years and current year (up to June, 2022) are given at **Annexure**.

(b) to (d) : The flue gases from combustion of the coal in the power plants contain carbon dioxide and water vapor, as well as other gases such as nitrogen oxides (NO_x), sulfur oxides (SO_x), mercury, and particulate matter.

Ministry of Environment, Forest and Climate Change (MoEF&CC) vide gazette notification dated 07.12.2015 has introduced environmental standards including SO₂, NO_x and Mercury etc. for coal-based TPPs under amendment to the Environment (Protection) Rules 1986. Further, MoEF&CC vide gazette notification dated 31.03.2021 categorized thermal power plants in three categories having different timelines along with the penalty for non-compliance.

The Pollution Control Boards take necessary action against non-compliant plants.

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 1110 ANSWERED IN THE RAJYA SABHA ON 26.07.2022

The details of the percentage of electricity generated from sources such as Thermal (coal, lignite, gas etc.), Nuclear, Hydro and Renewable sources in the country during the last three years and current year (up to June, 2022)

Category	Fuel	2019-20		2020-21		2021-22		2022-23 (up to June)*	
		Generation (MU)	% of share	Generation (MU)	% of share	Generation (MU)	% of share	Generation (MU)	% of share
THERMAL	COAL	961218.2	69.2	950937.6	68.8	1041487.4	69.8	307947.5	71.4
	LIGNITE	32978.8	2.4	30505.7	2.2	37094.0	2.5	10130.1	2.4
	NATURAL GAS	48442.6	3.5	50944.0	3.7	36015.7	2.4	7515.5	1.7
	DIESEL	108.2	0.0	126.3	0.0	117.2	0.0	31.8	0.0
Total THERMAL		1042747.9	75.1	1032513.5	74.7	1114714.4	74.7	325625.0	75.5
NUCLEAR		46472.5	3.3	43029.1	3.1	47112.1	3.2	10860.1	2.5
HYDRO		155769.1	11.2	150299.5	10.9	151627.3	10.2	38271.5	8.9
Renewable (other than large hydro)		138337.0	10.0	147247.5	10.7	170912.3	11.5	54587.6	12.7

* Tentative

Note: Gross Generation from Renewable sources (Wind, Solar, Biomass, bagasses, Small Hydro and Others)

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1111
ANSWERED ON 26.07.2022

SHORTAGE OF COAL SUPPLY IN POWER PLANTS

1111 SHRI VAIKO:
SHRI M. SHANMUGAM:

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

- (a) whether many State power plants are stressed power plants, requiring working capital to buy coal and start generating power in the country;
- (b) if so, the details thereof;
- (c) whether such power plants would be offered short term loans from Power Finance Corporation and REC Ltd.;
- (d) if so, the details thereof;
- (e) the number of State power plants whose generating capacity has been reduced due to shortage of supply of coal, and action taken by the Ministry to provide fuel; and
- (f) whether the power plants are generating power at their full capacity to meet energy demand, if so, the details thereof?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) & (b) : State Sector Generating Companies (GENCOs) are generally facing delays in realization of receivables from Distribution Companies (DISCOMs) which impair their ability to service debt in a timely manner that leads to exhaustion of working capital. Depletion of working capital in turn affects Gencos ability to purchase coal.

(c) & (d) : The details of State sector generation companies which approached Rural Electrification Corporation Limited (REC) for working capital loan for purchase of coal are given below:

Sl. No.	State	Utility	Loan Amount sanctioned by REC (Rs. Cr.)
1.	Maharashtra	Maharashtra State Power Generation Company Limited (MSPGCL)	1800
2.	Rajasthan	Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL)	500

3.	Punjab	Punjab State Power Corporation Limited (PSPCL)	400
4.	Haryana	Haryana Power Generation Corporation Limited (HPGCL)	500
5.	Karnataka	Karnataka Power Corporation Limited (KPCL)	500
TOTAL			3700

Decision to extend any loans is taken by the lenders as per their commercial wisdom through appropriate due diligence on case to case basis.

(e) : The coal stock available with the Thermal Power Plants (TPPs) is monitored on daily basis by CEA. As on 31.03.2022, the coal stock was 25.6 Million Tonnes (MT) and has increased to 28.4 MT as on 17.07.2022, which is about 50% of the normative coal stock required to be maintained by the TPPs. The coal stock available as on 17.07.2022 is sufficient to run these power plants for an average of 10 days at 85% Plant Load Factor (PLF).

Government has taken following steps to ensure smooth coal supply to power plants for unhindered power generation:-

- (i) An Inter-Ministerial Sub Group comprising of representatives from Ministry of Power, Ministry of Coal, Ministry of Railways, Central Electricity Authority (CEA), Coal India Limited (CIL) and Singareni Collieries Company Limited (SCCL) meet regularly to take various operational decisions to enhance supply of coal to thermal power plants as well as for meeting any contingent situations relating to Power Sector including to alleviate critical coal stock position in power plants.
- (ii) As per the decision taken in the meeting held under the Chairmanship of Cabinet Secretary on Augmentation of coal supply and power generation capacity, a Secretary level Inter Ministerial committee has been set up to ensure that the medium and long term requirements of coal are met. The IMC comprises of Chairman, Railway Board, Secretary, Ministry of Coal, Secretary, Ministry of Environment, Forest and Climate Change as members and Secretary, Ministry of Power as convener. Further, CEA provides technical support to the IMC.
- (iii) Ministry of Power vide OM dated 28.04.2022 has advised power plants to import coal for blending purposes during 2022-23.
- (iv) CIL has allocated about 16 MT coal on Road cum Rail (RCR) mode to TPPs.
- (v) Ministry of Railways has issued order to give preference to Power Sector for loading of coal from Good Shed Siding (GSS) and Private Washery.

(f) : The PLF of Coal/lignite based power plants of capacity 25 MW and above during the year 2021-22 was 58.87%. In 2022-23, the demand for electricity has been increased and power plants are generating the electricity as per schedule given to them. The PLF for Coal/lignite based power plants in FY 2022-23 upto June- 2022 is around 69.5 %.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1112
ANSWERED ON 26.07.2022

REVIVAL OF THE OPERATION OF NTPC UNIT IN KAYAMKULAM

1112 SMT. JEBI MATHER HISHAM:

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

whether the Union Government is planning to revive the operation of NTPC unit at Kayamkulam in Kerala?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

Kerala State Electricity Board Limited (KSEBL) is the sole beneficiary of the power generated from the Rajiv Gandhi Combined Cycle Power Plant (RGCCPP) of NTPC- Kayamkulam.

As per the agreement dated 12.11.2020 between NTPC and KSEBL, NTPC Kayamkulam is presently under long term preservation mode. The unit can be revived for operation with a notice of 45 days from KSEBL.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1113
ANSWERED ON 26.07.2022

REFORMS IN THE POWER SECTOR

**1113 SHRI VIJAY PAL SINGH TOMAR:
SHRI HARNATH SINGH YADAV:**

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

- (a) whether Government has formulated any plan to bring reforms in the power sector in the country;
- (b) if so, the details thereof; and
- (c) the achievement made by Government in bringing reforms in the power sector of the country?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) to (c): Government of India have launched the Reforms-based and Results-linked Revamped Distribution Sector Scheme with the objective of improving the quality and reliability of power supply to consumers through a financially sustainable and operationally efficient distribution Sector. The scheme has an outlay of Rs. 3,03,758 crore and estimated GBS from Central Government of Rs. 97,631 crore. The financial assistance under the scheme is tied to reform measures and achievement of results thereof as per mutually agreed action plans.

The Government of India have made several interventions to improve financial and operational efficiencies of DISCOMs including Liquidity Infusion Scheme (LIS); Additional Borrowing of 0.5% of GSDP to States linked to power sector reforms; introducing additional prudential norms for lending by Power Finance Corporation (PFC) Limited and REC Limited based on performance of utilities.

Further Ujwal DISCOM Assurance Yojana (UDAY) was launched with an overall aim of operational and financial turnaround of State owned Distribution Utilities (DISCOMs) through efficiency improvements and financial restructuring in Generation, Transmission and Distribution Sectors. As a result, State Power Distribution Utilities have reported improvement which include (i) Reduction in Aggregate Technical & Commercial (AT&C) losses from 23.70% in FY 16 to 20.93% in FY 20; and (ii) Reduction of Average Cost of Supply (ACS) – Average Revenue Realised (ARR) gap from Rs. 0.48 per kWh in FY 16 to Rs. 0.30 per kWh in FY 20.

The major interventions made in bringing reforms in the power sector is at **Annexure**.

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (c) OF UNSTARRED QUESTION NO. 1113 ANSWERED IN THE RAJYA SABHA ON 26.07.2022

- a. Government of India launched Pradhan Mantri Sahaj Bijli Har Ghar Yojana – Saubhagya during October 2017, with the objective to achieve 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 scheme, as on 31.03.2019, all States including West Bengal (except few households in Chhattisgarh) reported fully electrified. Since the launch of Saubhagya total 2.63 crore willing households were electrified. Subsequently, 18.85 lakh Households identified before 31.03.2019, which were unwilling earlier, later expressed willingness were electrified up to 31.03.2021. Further 4,40,893 households have been electrified as on 15.03.2022 under DDUGJY. Accordingly, till date, a total 2.86 crore households have been electrified after the launch of Saubhagya.
- b. Government of India launched Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) in December, 2014 for rural electrification works including separation of agriculture and non-agriculture feeders, strengthening and augmentation of sub-transmission & distribution infrastructure, metering at distribution transformers / feeders / consumers and electrification of villages across the country.
- c. Ministry of Power notified the Electricity (Right of Consumers) Rules 2020 with the conviction that the power systems exist to serve the consumers and the consumers have rights to get the reliable services and quality electricity. These Rules lay down the time limits and standards for the various services to be provided by the Distribution Companies across the country, to provide services in accordance with standards or pay compensation to their consumers.
- d. Ministry of Power notified Electricity (Late Payment Surcharge and Related Matters) Rules, 2022 to give huge relief to the DISCOMs, as well as electricity consumers and Generating companies which are also getting the benefit from assured monthly payments, which will help the whole power sector to become financially viable.
- e. Ministry of Power brought Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021 into effect in order to ensure timely recovery of the costs due to change in law and to facilitate investments in the power sector.
- f. To optimize the resources at national level with national merit order dispatch and to enable realization of benefits of the flexibility provided to Inter-State Generating Stations (ISGS), the Security Constrained Economic Despatch (SCED) pilot scheme was implemented from 01.04.2019. From the start of the SCED pilot in April 2019 up to January 2021, the cumulative savings in generation cost on All-India basis was ₹ 1624 crores. It has resulted in higher capacity utilization of more efficient power plants. Consumers are entitled to demand supply of Green Power from Discoms. Discoms would be obligated to procure and supply green power to eligible consumers.

- g. For unshackling the RE Sector, i.e. to remove barriers in availability and utilisation of RE and to address the issues that have hindered the growth of open access for a long time, Green Open Access Rules, 2022 have been issued. The Rules reduces the Open Access limit from 1 MW to 100 kW, which pave the way for small consumers also to purchase RE and there is no limit for Captive Consumers. Any consumer can demand supply of Green power from DISCOMs.
- h. Government of India had taken various steps for improvements in sub-transmission and distribution network and business processes of power distribution companies/boards/departments inter alia including extending financial support to them, aimed at improvement in power supply and reduction of Aggregate Technical and Commercial (AT&C) losses in the urban areas. Ministry of Power, Government of India notified "Integrated Power Development Scheme" (IPDS) on 03.12.2014 and subsumed ongoing "Restructured Accelerated Power Development and Reforms Programme" (RAPDRP) with IPDS. The Scheme has been closed on 31.03.2022 and all the works have been declared completed.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1114
ANSWERED ON 26.07.2022

COAL SHORTAGE IN THERMAL POWER PLANTS

1114 # DR. KIRODI LAL MEENA:

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

- (a) whether the attention of Government has been drawn towards the problem of shortage of coal being faced by the thermal power plants in the country;
- (b) if so, the details thereof and the reasons therefor;
- (c) whether Government of Rajasthan has requested to provide adequate quantity of coal for the operation of power plants in the State; and
- (d) if so, the details thereof and the steps being taken by Government to meet the shortage of coal?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) & (b) : The coal stock available in the Thermal Power Plants (TPPs) of the country is monitored by Central Electricity Authority (CEA) on daily basis. As on 31.03.2022, the coal stock was about 25.6 Million Tonnes (MT) and depleted to 21.9 MT as on 30.04.2022 but has increased in the months of May and June, 2022 and now reached 28.4 MT as on 17.07.2022, which is sufficient for an average of 10 days at a requirement of 85% Plant Load Factor (PLF).

(c) & (d) : The following requests were received from the Government of Rajasthan regarding coal supply to thermal power plants of RVUNL:-

- (i) The Hon'ble Chief Minister of Rajasthan vide DO letter dated 09.09.2021 addressed to the Hon'ble Union Minister of Power and New & Renewable Energy requested to ask the Ministry of Coal and Coal India Limited to supply 11-12 rakes/day to RVUN's power stations to ensure uninterrupted power in the State.
- (ii) The Hon'ble Chief Minister of Rajasthan vide DO letter dated 15.11.2021 addressed to the Hon'ble Union Minister of Power and New & Renewable Energy requested that the pending issues of coal blocks of RVUN may be taken up with MoEF&CC and to ask CIL for supply of additional 3-4 rakes/per day.

(iii) The Hon'ble Chief Minister of Rajasthan vide DO letter dated 15.02.2022 addressed to the Hon'ble Union Minister of Power and New & Renewable Energy requested for following interventions:

1. SECL/NCL to supply 42500 Metric Tonnes/day coal (GCV value-4500 kcal/kg) to 4340 MW capacity, which is currently linked to captive coal blocks of RVUN.
2. Allocation of additional 6 rakes/day over and above 9.3 rakes/day currently being supplied (total: 15.3 rakes/day) to the thermal power plants of RVUN linked to CIL.
3. To help expedite land acquisition and other approvals/clearances for 1136 hectares of second phase of PEKB coal block from the Government of Chhattisgarh.

Government has taken following actions to augment coal supply to power plants in the country:-

- (i) An Inter-Ministerial Sub Group comprising of representatives from Ministry of Power, Ministry of Coal, Ministry of Railways, Central Electricity Authority (CEA), Coal India Limited (CIL) and Singareni Collieries Company Limited (SCCL) meet regularly to take various operational decisions to enhance supply of coal to thermal power plants as well as for meeting any contingent situations relating to Power Sector including to alleviate critical coal stock position in power plants.
- (ii) As per the decision taken in the meeting held under the Chairmanship of Cabinet Secretary on augmentation of coal supply and power generation capacity, a Secretary level Inter Ministerial Committee has been set up to ensure that the medium and long term requirements of coal to power plants are met. The IMC comprises of Chairman Railway Board, Secretary, Ministry of Coal and Secretary, Ministry of Power as convener.
- (iii) Ministry of Power vide OM dated 28.04.2022 has advised power plants to import coal for blending purposes during 2022-23.
- (iv) Standing Committee on Linkage (Long Term) vide its meeting dated 29.03.2022 has recommended the bridge linkage of coal for a capacity of 2170 MW in Rajasthan against the two non-operational coal blocks i.e. Parsa and Kente Ext., for a period of 01 year.
- (v) MoP vide OM dated 13.7.2022 requested Ministry of Railways for grant of higher priority in loading of coal for power houses from goods sheds, private washery and imported coal loading from ports to power houses for thermal purpose.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1115
ANSWERED ON 26.07.2022

CONTRIBUTION OF ODISHA TO THE POWER SECTOR

1115 DR. SASMIT PATRA:

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

- (a) the details of the contribution of Odisha to the power sector in the country; and
- (b) the details of programmes/projects being undertaken in the power sector in Odisha to further develop the nation's power sector?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) & (b) : Odisha is bestowed with huge Coal Reserves and many Intra State Generation Projects (ISGPs) and Private Generation Projects are located in Odisha. The present generation installed capacity of Odisha is about 7650 MW (as on May 2022) comprising of about 4860 MW Thermal, 2160 MW Hydro and 630 MW Renewable generation. The source-wise renewable energy generation in respect of State of Odisha for the FY 2020-21, 2021-22 & 2022-23 (till May 2022) is as under:

Odisha RE Generation (In MU)			
Source Name	2020-21	2021-22	2022-23 (Up to May-22)
Wind	0.00	0.00	0.00
Solar	476.26	603.71	129.01
Biomass	42.71	100.08	13.89
Bagasse	0.00	0.00	0.00
Small Hydro	358.80	377.32	32.00
Other	0.00	0.00	0.00
Large Hydro	6859.97	5230.63	810.00
Total	7737.74	6311.73	984.90

The power from these generation is utilized to meet the demand of Odisha (about 6313 MW by May 2022) and to transfer the balance to other parts of the country through huge network of Inter State Transmission System (ISTS) comprising of about 10,500 ckm Transmission line and about 19,200 MVA of Transformation capacity. Further, 2 nos. of STATCOMs at Rourkela (± 300 MVAr) and Jeypore (± 200 MVAr) in Odisha also provide dynamic compensation in the ISTS Grid. The details of transmission projects in Odisha are as under:

- I. To further augment the ISTS system to meet the growing demand of Odisha, various new ISTS system is under planning stage. The details of the same are given below:
 - a. Jeypore – Jagdalpur 400 kV D/c (Quad) line
 - b. Reconductoring of Jharsuguda – Rourkela 400kV 2xD/c line with HTLS conductor. These schemes are expected to be commissioned in 2024-25 timeframe.
- II. Presently, POWERGRID is implementing 5 projects related to Communication, SCADA Systems, Unified Network Management Systems etc. in Odisha at a cost of about ₹ 58 crore as given below:

Sl. No.	Name of the project	Approx. Cost for Odisha Portion (Rs. In Cr.)
1	Establishment of Reliable communication Scheme under Central Sector for Eastern Region	13.5
2	Communication System under Eastern region Fiber Optic Expansion Project (Additional Project)	11.31
3	Upgradation of SCADA/RTUs/SAS in Central Sector Stations and strengthening of OPGW network project in Eastern Region	11.14
4	Strengthening of OPGW network within ER Grid and connectivity with other regions	6.68
5	Establishment of Unified Network Management System (UNMS) project for Central Sector & State Sector Communication in Eastern Region (ER)	15.28

Under the Distribution Scheme, Integrated Power Development Scheme (IPDS), all the four Utilities of Odisha (CESU, NESCO, SOUTHCO & WESCO) were provided financial support for strengthening and augmentation of Power distribution network in 21 circles, IT enablement, ERP.

Work under the scheme has been declared complete and the Scheme stands closed within the sunset timeline of 31.03.2022. The major work undertaken based on the closure documents submitted by the State are:

- New 33/11 kV Sub-station: 14 Nos. (~164 MVA additional capacity)

- 33/11 kV additional Power Transformer/capacity enhancement: 92 Nos. (~375 MVA capacity)
- 33 kV and 11 kV New lines: ~745 Kms
- Reconductoring of 33 kV and 11 kV existing lines: ~1000 Kms
- Aerial Bunched Cable: ~3400 KM
- Underground Cables: ~20 KM
- New Distribution Transformers: ~1980 Nos. (~314 MVA additional capacity)
- Capacity Enhancement of DT: ~1000 Nos. (~215 MVA additional capacity)

In addition, work was also undertaken under in CESU under R-APDRP scheme [subsumed in IPDS]. Details are as under:

Completion of System Strengthening Projects under IPDS				
State	CESU	NESCO	SOUTHCO	WESCO
No. of Circles Sanctioned	05	05	06	05
No. of Circle Completed	05	05	06	05

R-APDRP Projects						
State	Part A		Part B		Closure Cost	GoI Amount Disb.
	No. of Towns	No. of town completed	No. of Towns	No. of towns completed		
Odisha	12	12	12	12	414	201

Achievements under Saubhagya & DDUGJY in Odisha:

I. Status of Village Electrification (Odisha)

As on 28.04.2018, State had reported electrification of all census villages in the State of Odisha.

II. Saubhagya (Odisha):

As per Saubhagya Portal, all the willing un-electrified rural and urban households in the State of Odisha, have been electrified.

III. The DDUGJY scheme outlay for State of Odisha is at Annexure.

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 1115 ANSWERED IN THE RAJYA SABHA ON 26.07.2022

Physical progress of the works of DDUGJY scheme outlay for State of Odisha:

Para-meter	SAGY Villages (Nos)	Substation (Nos)		DTRs (Nos)	Lines (CKT KMs)				Energy Meters		
		New	Aug		LT line	(Feeder Separation)	11 (KV)	33 & 66 KV Line	Consumer	DTR	Feeder
Surveyed	30	12	164	3269	2883	1239.89	3384	1547.21	2271702	0	902
Ach (%)	30 (100%)	12 (100%)	164 (100%)	3269 (100%)	2883 (100%)	1239.89 (100%)	3384 (100%)	1547.21 (100%)	2271702 (100%)	0	902 (100%)

ADDITIONAL INFRA (Odisha):

Para-meter	SAGY Villages (Nos)	Substation (Nos)		DTRs (Nos)	Lines (CKT KMs)			
		New	Aug.		LT line	(Feeder Separation)	11 (KV)	33 & 66 KV Line
Surveyed	0	0	0	10943	8524.5	0	2206.88	0
Ach (%)	0	0	0	10943 (100%)	8524.5 (100%)	0	2206.88 (100%)	0

.....2.

RE Component:

Plan	Amount sanctioned Rs. crore	Amount Disbursed Rs. crore	Para-meter	Substation (Nos)		DTRs (Nos)	Lines (CKT KMs)			Remarks
				New	Aug.		LT line	11 (KV)	33 & 66 KV	
X Plan	443.93	344.38 (77%)	Surveyed	1	10	8798	8772.41	4312.87	13.48	Works completed
			Ach (%)	1 (100%)	10 (100%)	8798 (100%)	8772.41 (100%)	4312.87 (100%)	13.48 (100%)	
XI Plan	3491.72	2690.52 (77%)	Surveyed	34	238	62640	51740.78	33462.11	630.1	Works completed
			Ach (%)	34 (100%)	238 (100%)	62640 (100%)	51740.78 (100%)	33462.1 (100%)	630.1 (100%)	
XI-II plan	3552.31	3033.2 (85%)	Surveyed	8	175	43809	38433.44	15671.4	0	Works completed
			Ach (%)	8 (100%)	175 (100%)	4389 (100%)	38433.44 (100%)	15671.4 (100%)	0	

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1116
ANSWERED ON 26.07.2022

LAND ACQUIRED BY NTPC IN JHARKHAND

1116 SHRI DHIRAJ PRASAD SAHU:

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

- (a) the total area of land acquired by NTPC in the State of Jharkhand including NTPC Tandwa, along with the number of families displaced including from Tandwa, due to the said land acquisition during the last five years and the current year;
- (b) the nature of policy being adopted by NTPC for land acquisition and rehabilitation of displaced families;
- (c) the nature of assistance provided by NTPC for rehabilitation of displaced families;
- (d) if so, the details thereof; and
- (e) if not, the number of families awaiting the rehabilitation list?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) : The total area of land acquired for NTPC in the State of Jharkhand, during the last five years and the current year (upto 12.07.2022) is 46.81 acre and total no. of displaced families is 01 out of said land acquisition.

The total area of land specifically for NTPC Tandwa (North Karanpura Super Thermal Power Project), was acquired by the State Government under the extant Land Acquisition Act well before the year 2010. The land compensation amount as demanded by the State Government was deposited by NTPC with the District Land Acquisition Authority for further disbursement. The total no. of displaced families in the last five years and the current year is 65 due to said land acquisition for NTPC Tandwa which was done before the year 2010, however there were certain families who have not received compensation then and have received compensation in the last 5 years and upto current year (12.07.2022).

Therefore, the total no. of displaced families in Jharkhand during last 5 years and upto present year is 66 (01+65).

(b) : For NTPC, private land for the projects is acquired by the respective State Govts./ State Authorities, on request of NTPC, as per the extant Land Acquisition Act of the Govt. of India (GOI)/ Act(s) of respective States.

The land rate/ compensation & R&R package is decided by the concerned State Govt./ State Authority as per provisions of the extant Land Acquisition Act of Govt. of India (i.e. The RFCT LARR Act, 2013)/ Acts/ Policies of respective State Governments.

(c) & (d) : For NTPC, the Rehabilitation of displaced families is decided by the respective State Govt. as per the extant LA Act (i.e. The RFCT LARR Act, 2013) or the extant Act/ R&R Policy of the State, as decided by the Appropriate Authority of the State Govt.

NTPC provides the demanded amount to the respective Land Acquisition Authority/ District Administration for dispensation of the amount of compensation and makes cost provisions for R&R benefits to the eligible displaced families.

(e) : For 18 families, NTPC has to pay Rehabilitation amount after due disbursal of compensation for assets (structures) by District Administration.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1117
ANSWERED ON 26.07.2022

POTENTIAL FOR HYDRO POWER GENERATION

1117 SHRI SANJAY RAUT:

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

- (a) whether Government has assessed the potential of States which are capable of generating hydro power;
- (b) if so, the details thereof along with the reasons for failure of Government to harness the potential;
- (c) whether various hydro power projects allotted to the private sector in various States are yet to take off, and if so, the details thereof along with the reasons for delay, project-wise; and
- (d) the other steps taken by Government for the completion of hydro power projects in a time bound manner in the country?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) & (b) : Central Electricity Authority (CEA), a technical body, under Ministry of Power, Government of India has carried out study for assessment of potential of hydro power development in the country during the period 1978-1987. As per the study, the power potential of large hydro-electric projects (above 25 MW capacity) in the country is 145320 MW. The state-wise details of hydro power potential in India is enclosed at **Annexure-I**.

The total installed capacity of hydro-electric projects (above 25 MW) is 46850.15 MW as on 30.06.2022. In addition, 36 hydro-electric projects (above 25 MW), with capacity of 14103.5 MW are under construction. A summary of the projects is enclosed at **Annexure-II**.

The main challenges involved in harnessing the potential of hydro power in country are as under:-

- I. Land Acquisition Issues
- II. Environment and Forest issues
- III. Rehabilitation & Resettlement Issues
- IV. Inadequate Infrastructural facilities
- V. Law & Order / Local issues
- VI. Geological Surprises
- VII. Natural Calamities
- VIII. Inter-state Issues

(c) : As on 30.06.2022, 10 Nos. of Hydro Projects concurred by CEA, which have been allotted to private sector are yet to be taken up for construction for various reasons. Details are enclosed at **Annexure-III**.

(d) : For the completion of hydro power projects in a time bound manner, Ministry of Power has issued comprehensive guidelines to reduce time and cost overruns in Hydro Power Projects on 08.11.2019. Ministry of Power has also notified a “Dispute Avoidance Mechanism” through 'Independent Engineer (IE)’ on 29.09.2021 and “Dispute Resolution Mechanism” through “Conciliation Committee of Independent Experts (CCIE)” on 29.12.2021 to expeditiously and effectively address contractual disputes, which have been identified as one of the major reasons impacting timely completion of Hydro Power Projects. Stalled hydro projects in Arunachal Pradesh, have also been indicated against various Hydro CPSEs of Ministry of Power vide letter dated 22.12.2021 for timely completion.

Further, CEA monitors the progress of under construction projects through site visits and interaction with the developers and other stakeholders. Regular reviews are also undertaken in the Ministry of Power to identify constraints and facilitate faster resolution of inter-ministerial and other outstanding issues which are critical for commissioning of the project.

**ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED
QUESTION NO. 1117 ANSWERED IN THE RAJYA SABHA ON 26.07.2022**

STATE-WISE POTENTIAL FOR LARGE HYDRO POWER IN THE COUNTRY

Region/ State	Identified Capacity above 25 MW as per Reassessment Study (1978-87)
NORTHERN REGION (NR)	
Jammu & Kashmir	11567
Ladakh	2046
Himachal Pradesh	18470
Punjab	971
Haryana	64
Rajasthan	483
Uttarakhand	17998
Uttar Pradesh	664
Sub Total (NR)	52263
WESTERN REGION (WR)	
Madhya Pradesh	1970
Chhattisgarh	2202
Gujarat	590
Maharashtra	3314
Goa	55
Sub total (WR)	8131
SOUTHERN REGION (SR)	
Andhra Pradesh	3261
Telangana	1099
Karnataka	6459
Kerala	3378
Tamil Nadu	1693
Sub Total (SR)	15890
EASTERN REGION (ER)	
Jharkhand	582
Bihar	40
Odisha	2981
West Bengal	2829
Sikkim	4248
Sub Total (ER)	10680
NORTH EASTERN REGION (NER)	
Meghalaya	2298
Tripura	0
Manipur	1761
Assam	650
Nagaland	1452
Arunachal Pradesh	50064
Mizoram	2131
Sub Total (NER)	58356
ALL INDIA	145320

ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 1117 ANSWERED IN THE RAJYA SABHA ON 26.07.2022

Sector-wise Installed Capacity of H.E. Stations (above 25 MW) in the country		
Sector	No. of Stations	Installed Capacity (MW)
Central	42	15664.70
State	147	27254.45
Private	22	3931.00
Total	211	46850.15

Summary of Under Construction HEPs (above 25 MW) -Sector-wise) in the country		
Sector	No. of HEP	Capacity (MW)
Central	16	9025
State	11	2601.5
Private	9	2477
Total	36	14103.5

ANNEXURE REFERRED TO IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 1117 ANSWERED
IN THE RAJYA SABHA ON 26.07.2022

Hydro Electric Schemes in Private Sector Concurred by CEA and
yet to be taken up for construction for various reasons

Sl. No	Scheme	Agency	Installed Capacity (MW)	Date of CEA Concurrence	Remarks
Arunachal Pradesh					
1.	Talong Londa	GLHPL	225	16.08.2013	<ul style="list-style-type: none"> • EC accorded on 07.08.2015. • FC-I & FC-II yet to be obtained.
2.	Etalin	EHEPCL	3097	12.07.2013	<ul style="list-style-type: none"> • EC recommended by EAC on 31.01.2017. Letter will be issued after FC-I. • FC-I & FC-II yet to be obtained.
3.	Attunli	AHEPCL	680	02.07.2018	<ul style="list-style-type: none"> • Both EC and FC are yet to be obtained.
4.	Lower Siang	JAPL	2700	16.02.2010	<ul style="list-style-type: none"> • Both EC & FC are yet to be obtained.
5.	Demwe Lower	ADPL	1750	20.11.2009	<ul style="list-style-type: none"> • EC accorded on 12.02.2010. • FC accorded on 03.05.2013. • Project is under NCLT since 2017.
6.	Kalai-II	Kalai PPL	1200	27.3.2015	<ul style="list-style-type: none"> • EC accorded 20.05.2015. Final order will be issued after obtaining FC-I. • FC-I and FC-II yet to be obtained.
7.	Heo	HHPPL	240	28.07.2015	<ul style="list-style-type: none"> • EC accorded on 10.11.2015. • FC-I accorded on 27.10.2015. • FC-II yet to be obtained.
8.	Tato-I	SHPPL	186	28.10.2015	<ul style="list-style-type: none"> • EC accorded on 10.11.2015. • FC-I accorded on 27.10.2015. • FC-II yet to be obtained.
Sub- Total (MW)			10078		
Nagaland					
9.	Dikhu	NMPPL	186	31.03.2014	<ul style="list-style-type: none"> • EC yet to be obtained by developer. • FC not applicable as forest land is not involved.
Sub-Total (MW)			186		
Uttarakhand					
10.	Alaknanda	GMRL	300	08.08.2008	<ul style="list-style-type: none"> • EC accorded on 12.3.2008. • FC-I accorded on 08.11.2011. • FC-II accorded on 09.11.2012. • The project is included in the list of 24 projects under review by Hon'ble Supreme Court.
Sub-Total (MW)			300		
Grand Total (MW)			10564		

Note: EC: Environment Clearance FC-I: Stage-I of forest clearance

FC-II: Stage-II of forest clearance

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1118
ANSWERED ON 26.07.2022

CAPACITY OF EASTERN STATES FOR HYDRO POWER GENERATION

1118 # SHRI DEEPAK PRAKASH:

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

- (a) whether Government has assessed the capacity of the Eastern States for hydro power generation, if so, the details thereof and the steps being taken by Government to take advantage of this potential;
- (b) whether the Central Electricity Authority has assessed the capacity of Jharkhand for hydro power generation, if so, the details thereof; and
- (c) the details of the proposed projects for tapping hydro power potential of Jharkhand and by when these projects are likely to be started?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) : Central Electricity Authority (CEA), a technical body, under Ministry of Power, Government of India has carried out a study for assessment of potential of hydro power development in the country, including the Eastern States, during the period 1978-1987. As per the study, the power potential of Large Hydro Projects of the Eastern States is 10680 MW. The State-wise details of hydro power potential in the Eastern States are enclosed at **Annexure-I**.

The Government of India has taken a number of policy measures to promote the development of hydro-electric projects in the country, which are as under:

- I. Declaring Large Hydro Power (LHPs) (> 25 MW projects) as Renewable Energy source.
- II. Hydro Purchase Obligation (HPO) as a separate entity within Non-Solar Renewable Purchase Obligation (RPO).
- III. Tariff rationalization measures for bringing down hydro power tariff.
- IV. Budgetary Support for Flood Moderation/Storage Hydro Electric Projects (HEPs).
- V. Budgetary Support to Cost of Enabling Infrastructure, i.e. roads/bridges:
 - a) Rs. 1.5 crore per MW for projects upto 200 MW.
 - b) Rs. 1.0 crore per MW for projects above 200 MW.

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VI. Notification of a “Dispute Avoidance Mechanism” through 'Independent Engineer (IE)’ and “Dispute Resolution Mechanism” through “Conciliation Committee of Independent Experts (CCIE)” to expeditiously and effectively address contractual disputes.

(b) & (c): As per the Reassessment Study, 1987 carried out by CEA, the power potential of Large Hydro Projects in the State of Jharkhand is estimated to be 582 MW. The details are attached at **Annexure-II**. In addition, Government of Jharkhand has informed that Small Hydro Projects (SHPs) (below 25 MW) with aggregate installed capacity of 125.5 MW have been identified by the State Government. The details are attached at **Annexure-III**. Hydro-electric projects are to be allocated to developers by concerned State Government.

ANNEXURE-I

**ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED
QUESTION NO. 1118 ANSWERED IN THE RAJYA SABHA ON 26.07.2022**

**STATE-WISE POTENTIAL FOR LARGE HYDRO POWER
IN EASTERN STATES OF COUNTRY**

Region/ State	Identified Capacity above 25 MW as per Reassessment Study (1978-87)
Jharkhand	582
Bihar	40
Odisha	2981
West Bengal	2829
Sikkim	4248
Total (ER)	10680

ANNEXURE-II**ANNEXURE REFERRED TO IN REPLY TO PARTS (b) & (c) OF UNSTARRED QUESTION NO. 1118 ANSWERED IN THE RAJYA SABHA ON 26.07.2022**

Hydro Power Potential Identified in Jharkhand during Reassessment Study (Above 25 MW)

Name of Project	River	I. C. (MW)
Panchet (Panchet Hill)	Damodar	40
Maithon	Damodar	60
Subernrekha MPP	Subernrekha	30
Koel Karo (KoelKaro St-I (Lumpungkhel PH))	N. Koel	145
Serengada	N. Koel	37
Sankh-II (Upper Sankh St-II)	Sankh	55
Lower Sankh	Sankh	55
Indrapuri (Khadwan)	Sone	160
TOTAL		582

ANNEXURE-III

ANNEXURE REFERRED TO IN REPLY TO PARTS (b) & (c) OF UNSTARRED QUESTION NO. 1118 ANSWERED IN THE RAJYA SABHA ON 26.07.2022

DETAILS OF SMALL HYDRO PROJECTS IDENTIFIED BY GOVERNMENT OF JHARKHAND (BELOW 25 MW)

Sl. No.	Name of Project	Capacity (MW)
1	Basiya	9
2	Torpa	13
3	Dasham Fall	6
4	Manoharpur	8
5	Jonha	1
6	Arki	1.5
7	Sitafall	0.7
8	Hundru	11
9	Kurdeg	19
10	Sugabandh-I	4.5
11	Sugabandh-II	4.5
12	Tehthaitanagar	24
13	Raidih	23
	Total	125.2

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1119
ANSWERED ON 26.07.2022

ONGOING POWER PROJECTS IN THE COUNTRY

1119 DR. L. HANUMANTHAIAH:

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

- (a) the details of ongoing power projects along with the power produced by them in the country, State-wise;
- (b) the funds sanctioned, allocated and utilized under these projects during the financial year 2021-22 and the current year;
- (c) whether some of the projects are facing huge cost/time overrun; and
- (d) if so, the details thereof and the reasons therefor, along with the action taken by Government for timely completion of these projects in future without cost overrun?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) to (d) : As per Section 7 of the Electricity Act, 2003, "any generating company may establish, operate and maintain a generating station without obtaining a license/permission under this Act, if it complies with the technical standards relating to connectivity with the grid. Accordingly, sanction of the Government is not required for setting up of thermal power projects". At present 20 Thermal Power Projects aggregating to 27,550 MW are under active construction in the country. The details of funds sanctioned, allocated & utilised under these projects during the last three years and the current year, along with details of time overrun are given at **Annexure-I**.

At present 27 Hydro Electric Projects (HEPs) (above 25 MW) aggregating to 12,867.50 MW are under active construction in the country. The details of funds sanctioned, allocated & utilised, during the Financial Year 2021-22 and the current year, along with details of time overrun in respect of the under-construction Hydro-electric projects are given at **Annexure-II**.

These projects are under construction, so no generation is taking place in these power projects.

The main reasons for delay in completion of Hydro and Thermal projects are as under:

- Contractual Issues
- Lack of readiness of railway line / Railway sidings
- Delay in supply by equipment manufacturers
- Delay in land acquisitions
- Disruption of work due to Local issues
- Litigations
- Delay due to change in design
- Delay in getting coal mines, coal linkages
- Geological surprises (in case of hydro projects)

The following action/steps are taken by the Ministry of Power (MoP)/ Central Electricity Authority (CEA) to ensure timely completion of Power Projects:

- MoP/ CEA monitor the progress of under-construction power projects through frequent site visits and interaction with the developers & other stakeholders. CEA holds review meetings periodically with the developers and other stakeholders to identify and resolve issues critical for commissioning of Projects.
- Regular reviews are also undertaken in MoP to identify the constraint areas to facilitate faster resolution of inter-Ministerial and other outstanding Issues.
- In case of Central Power Sector Undertakings (CPSUs) projects, the project implementation parameters/ milestones are incorporated in the annual MoU signed between respective CPSUs and Ministry of Power and the same are monitored during the quarterly performance review meetings of CPSUs and other meetings held in MoP/CEA.
- Various matters related with project implementation are being taken up with State Government/District Administration for facilitating the support in resolving the issues to the project implementing agencies.
- Matters are taken up with State Government/District Administration for extending help to the project implementing agencies in resolving Right of Way (ROW) issues.

ANNEXURE-I

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (d) OF UNSTARRED QUESTION NO. 1119 ANSWERED IN THE RAJYA SABHA ON 26.07.2022

Details of Expenditure Incurred, Time & Cost Over run in Under construction Thermal Power Projects in the country

Sl. No.	Project Name	Implementing Agency	Unit No	Capacity (MW)	Time			Cost				EXPENDITURE	
					Original date of Trial Run	Anticipated Date of Trial Run	Time over run	Original Cost	Latest Cost (cr)	Cost Overrun (%)	Cost Overrun (Rs.in crores)	EXPENDITURE DURING 2021-22	EXPENDITURE DURING 2022-23 (Upto May 22)
Andhra Pradesh													
1	Dr. Narla Tata Rao TPS St-V	APGENCO	U-1	800	Apr-19	Sep-22	3 Years, 5 Months	5286.54	7586.67	43.51%	2300.13	769.5	104.08
2	Sri Damodaram Sanjeevaiah TPP St-II	APPDCL (JV of APGENCO & ILFS)	U-1	800	Jun-19	Oct-22	3 Years, 4 Months	4276.03	8069.87	88.72%	3793.84	920.53	72.24
Bihar													
3	Barh STPP-I	NTPC	U-2	660	Dec-10	Dec-22	12 Years, 0 Months	8693	21312.1	145.16%	12619.1	1185.00	122.00
			U-3	660	Oct-11	Dec-23	12 Years, 2 Months						
4	Buxar TPP	SJVN	U-1	660	May-23	Jun-23	0 Years, 1 Months	10439.09	10439.09	0.00%	0	2691.06	545.00
			U-2	660	Sep-23	Jan-24	0 Years, 4 Months						
Jharkhand													
5	North Karanpura STPP	NTPC	U-1	660	Oct-22	Oct-22	0 Years, 0 Months	14367	15389.42	7.12%	1022.42	1051.00	107.00
			U-2	660	May-23	May-23	0 Years, 0 Months						
			U-3	660	Jan-24	Jan-24	0 Years, 0 Months						
6	Patratu STPP	PVUNL(JV of NTPC & Jharkhand Bidyut Vitran Nigam Ltd.)	U-1	800	Jun-24	Jun-24	0 Years, 0 Months	17112	18668	9.09%	1556	1846.48	215.97
			U-2	800	Dec-24	Dec-24	0 Years, 0 Months						
			U-3	800	Jun-25	Jun-25	0 Years, 0 Months						
Karnataka													
7	Yelahanka CCPP	KPCL	GT+ST	370	Feb-18	Jan-23	4 Years, 11 Months	1571.18	2243.34	42.78%	672.16	253.8	2.74
Maharashtra													
8	Bhusawal TPS	MAHAGENCO	U-6	660	May-22	Jun-23	1 Years, 1 Months	4548	4550.97	0.07%	2.97	1173.8	86.2

Tamil Nadu													
9	Ennore SCTPP	TANGEDCO	U-1	660	Nov-17	Mar-24	6 Years, 4 Months	9800	9800	0.00%	0	260.14	16.99
			U-2	660	Jan-18	Apr-24	6 Years, 3 Months						
10	North Chennai TPP St-III	TANGEDCO	U-1	800	Apr-19	Oct-22	3 Years, 6 Months	6376	8722.86	36.81%	2346.86	760.29	25.34
11	Uppur Super Critical TPP	TANGEDCO	U-1	800	Nov-19	On hold *	On hold	12778	12778	0.00%	0	47.08	0
			U-2	800	Nov-19	On hold *	On hold						
12	Udangudi STPP Stage I	TANGEDCO	U-1	660	Jan-21	Mar-24	3 Years, 2 Months	13076.705	13076.71	0.00%	0	1711.14	178.41
			U-2	660	Mar-21	Jun-24	3 Years, 3 Months						
Telangana													
13	Telangana STPP St- I	NTPC	U-1	800	May-20	Aug-22	2 Years, 3 Months	10599	10997.7	3.76%	398.7	828.00	98.00
			U-2	800	Nov-20	Feb-23	2 Years, 3 Months						
14	Yadadri TPS	TSGENCO	U-1	800	Oct-20	Apr-23	2 Years, 6 Months	25099.42	29965.48	19.39%	4866.06	3582.33	523.24
			U-2	800	Oct-20	Aug-23	2 Years, 10 Months						
			U-3	800	Jun-21	Dec-23	2 Years, 6 Months						
			U-4	800	Jun-21	Apr-24	2 Years, 10 Months						
			U-5	800	Oct-21	Aug-24	2 Years, 10 Months						
Uttar Pradesh													
15	Ghatampur TPP	NUPPL (JV of NLC and UPRVUNL)	U-1	660	May-20	Aug-22	2 Years, 3 Months	17237.8	17237.8	0.00%	0	1883.23	352.31
			U-2	660	Nov-20	Feb-23	2 Years, 3 Months						
			U-3	660	May-21	Jun-23	2 Years, 1 Months						
16	Khurja SCTPP	THDC	U-1	660	Jul-23	Jan-24	0 Years, 6 Months	11089.42	11089.42	0.00%	0	1877.46	358.05
			U-2	660	Jan-24	Jul-24	0 Years, 6 Months						
17	Jawaharpur STPP	UPRVUNL	U-1	660	Dec-20	Apr-23	2 Years, 4 Months	8078.56	10566.27	30.79%	2487.71	2224.36	188.72
			U-2	660	Apr-21	Oct-23	2 Years, 6 Months						
18	Obra-C STPP	UPRVUNL	U-1	660	Dec-20	Oct-22	1 Years, 10 Months	8777.71	10416	18.66%	1638.29	1826.42	104.53
			U-2	660	Apr-21	May-23	2 Years, 1 Months						
19	Panki TPS Extn.	UPRVUNL	U-1	660	Sep-21	May-23	1 Years, 8 Months	5816.7	5816.7	0	0	951.81	373.4
West Bengal													
20	Sagardighi Thermal Power Plant Ph-III	WBPDC	U-1	660	Jan-24	Apr-24	0 Years, 3 Months	3862.65	4567.32	18.24%	704.67	330.97	65.82
	Total			27550									

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (d) OF UNSTARRED QUESTION NO. 1119 ANSWERED IN THE RAJYA SABHA ON 26.07.2022

DETAILS OF UNDER CONSTRUCTION HYDRO ELECTRIC PROJECTS (ABOVE 25 MW)

Sl. No	Project Name/(I.C.)/ Executing Agency	Unit No.	Cap. (MW)	Org. Comm. Sched.	Ant. Comm. Sched.	Time over run (months)	Org. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	EXPENDITURE DURING 2021-22 (in Crs.)	EXPENDITURE DURING 2022-23 (Upto June 22) (in Crs.)
1	2	4	5	6	7	8	9	10	11	12	13
	Andhra Pradesh										
1	Polavaram (12x80 = 960 MW) APGENCO / Irr. Deptt., A.P.	1 2 3 4 5 6 7 8 9 10 11 12	80 80 80 80 80 80 80 80 80 80 80 80	2016-17 2016-17 2016-17 2016-17 2016-17 2016-17 2017-18 2017-18 2017-18 2017-18 2017-18 2017-18 (Mar'18)	2024-25 2024-25 2024-25 2024-25 2024-25 2024-25 2025-26 2025-26 2025-26 2025-26 2025-26 2025-26 (Mar,26)	96	3013.68 (2010-11 PL) (Power Component)	5338.95 (2016-17 PL) (Power Component)	2325.27 (77.15)	200.35	25.59
2	Pinnapuram (4x240+2x120 MW) M/s Greenko	1 2 3 4 5 6	240 240 240 240 120 120	2024-25 2024-25 2024-25 2024-25 2024-25 2024-25 (Mar'25)	2024-25 2024-25 2024-25 2024-25 2024-25 2024-25 (Mar'25)	Nil	6465.22 (Feb'2021 PL)	6465.22 (Feb'2021 PL)	Nil	Initial stage of construction	Initial stage of construction
	Arunachal Pradesh										
3	Subansiri Lower (8x250 = 2000 MW) NHPC	1 2 3 4 5 6 7 8	250 250 250 250 250 250 250 250	2009-11 2009-11 2009-11 2009-11 2009-11 2009-11 2009-11 2009-11 (Sep'10)	2022-23 2022-23 2023-24 2023-24 2023-24 2023-24 2023-24 2023-24 (Mar'24)	162	6285.33 (12/02)	19992.43 (04/17)	13707.10 (218.08)	2151.73	456.54

Sl. No	Project Name/(I.C.)/ Executing Agency	Unit No.	Cap. (MW)	Org. Comm. Sched.	Ant. Comm. Sched.	Time over run (months)	Org. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	EXPENDITUE DURING 2021-22 (in Crs.)	EXPENDITURE DURING 2022-23 (Upto June 22) (in Crs.)
1	2	4	5	6	7	8	9	10	11	12	13
	Assam										
4	Lower Kopili (2x55+2x2.5+1x5 =120MW)	1 2 3 4 5	55 55 5 2.5 2.5	2024-25 2024-25 2024-25 2024-25 2024-25 (Jun'24)	2024-25 2024-25 2024-25 2024-25 2024-25 (Jun'24)	NIL	1115.91 (01/15)	1795 (2021)	679.09 (60.86)	26.64	0
	Himachal Pradesh										
5	Parbati - II (4x200 = 800 MW) NHPC	1 2 3 4	200 200 200 200	2009-10 2009-10 2009-10 2009-10 (Sept'09)	2023-24 2023-24 2023-24 2023-24 (Sep,23)	168	3919.59 (12/01)	9897.59 (04/18)	5978 (152.51)	770.79	219.58
6	Uhl-III (3x33.33 = 100 MW) BVPCL	1 2 3	33.33 33.33 33.33	2006-07 2006-07 2006-07 (Mar'07)	2022-23 2022-23 2022-23 (Dec,23)	201	431.56 (09/02)	2400 (2022)	1968.44 (456.12)	181.28	27.7
7	ShongtomKarcham (3x150 = 450 MW) HPPCL	1 2 3	150 150 150	2016-17 2016-17 2016-17 (Mar'17)	2024-25 2024-25 2024-25 (Mar,25)	96	2807.83 (07/11)	2807.83 (07/11)	#	162.70	30.64
8	Tidong-I (2x50 =100 MW) Statkraft India Pvt. Ltd.	1 2	50 50	2013-14 2013-14 (Dec'13)	2022-23 2023-24 (Apr 23)	112	543.15 (06/18)	1472.00	928.85 (171.01)	263.00	67.00
9	Kutehr 3x80=240 MW JSW Energy (Kutehr) Ltd	1 2 3	80 80 80	2024-25 2024-25 2024-25 (Nov'24)	2025-26 2025-26 2025-26 (Nov'25)	12	1798.13 (09/2011)	2879 (09/2011)	1080.87 (60.11)	375.28	100.38
10	Luhri Hydro Electric Project Stage-I (2X 80+2X25 MW = 210 MW)	1 2 3 4	80 80 25 25	2025-26 2025-26 2025-26 (Jan'26)	2025-26 2025-26 2025-26 (Jan'26)	NIL	1912.59 (2017)	1912.59 (2017)	NIL	222.54	121.58

Sl. No	Project Name/(I.C.)/ Executing Agency	Unit No.	Cap. (MW)	Org. Comm. Sched.	Ant. Comm. Sched.	Time over run (months)	Org. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	EXPENDITUE DURING 2021-22 (in Crs.)	EXPENDITURE DURING 2022-23 (Upto June 22) (in Crs.)
11	Dhulasidh (SJVN) 2x 33+66MW Hamirpur/ Kangra	1 2	33 33	2025-26 2025-26 (Nov'25)	2025-26 2025-26 (Nov'25)	NIL	687.97 (05/2020)	687.97 (05/2020)	NIL	85.09	40.58
	Govt. of UT of J&K										
12	PakalDul (4x250= 1000 MW) CVPPL	1 2 3 4	250 250 250 250	2020-21 2020-21 2020-21 2020-21 (Apr'20)	2025-26 2025-26 2025-26 2025-26 (July'25)	63	8112.12 (03/13)	8112.12 (03/13)	#	542.41	114.12
13	Parnai 3x12.5= 37.5 MW JKSPDC	1 2 3	12.5 12.5 12.5	2017-18 2017-18 2017-18 (Jan'18)	2023-24 2023-24 2023-24 (Dec,23)	71	640.86 (Completion cost)	640.86 (Completion cost)	#	31.61	4.315
14	Kiru (4x156=624 MW) CVPPL	1 2 3 4	156 156 156 156	2023-24 2023-24 2023-24 2023-24 (Aug,23)	2024-25 2024-25 2024-25 2024-25 (Aug,24)	12	4287.59 (07/18)	4287.59 (07/18)	Nil	273.87	44.17
15	Ratle (4x205+1x30) = 850 MW RHPPL / NHPC	1 2 3 4 5	205 205 205 205 30	2017-18 2017-18 2017-18 2017-18 2017-18 (Jan,18)	2025-26 2025-26 2025-26 2025-26 2025-26 (Feb'26)	97	5517.02 (Completion Cost)	5517.02 (11/18)	Nil	137.7	12.31
16	Kwar (4x135=540 MW) CVPPL	1 2 3 4	135 135 135 135	2026-27 2026-27 2026-27 2026-27 (Nov'2026)	2026-27 2026-27 2026-27 2026-27 (Nov'2026)	Nil	4526.12 (Sep.'20)	4526.12 (Sep.'20) 4526.12 (Sep.'20)	Nil	21.45	7.34

Sl. No	Project Name/(I.C.)/ Executing Agency	Unit No.	Cap. (MW)	Org. Comm. Sched.	Ant. Comm. Sched.	Time over run (months)	Org. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	EXPENDITURE DURING 2021-22 (in Crs.)	EXPENDITURE DURING 2022-23 (Upto June 22) (in Crs.)
Kerala											
17	Pallivasal 2x30 = 60 MW KSEB	1	30	2010-11	2022-23 2022-23 (Mar,23)	144	222 (1999)	550.00 (2018)	328 (147.74)	41.845	10.77
		2	30	2010-11 (Mar'11)							
18	Thottiyar (1x30+1x10)= 40MW KSEB	1	30	2012-13	2022-23 2022-23 (Mar,23)	131	136.79 (2007)	280 (2018)	143.21 (104.69)	19.07	7.392
		2	10	2012-13 (Apr'12)							
Punjab											
19	Shahpurkandi 3x33+3x33+1x8 =206 MW, Irrigation Deptt. &PSPCL	1	33	2015-16	2024-25 2024-25 2024-25 2024-25 2024-25 2024-25 2024-25 (Aug, 24)	101	1835.50 (04/08) (Power Component)	1938.74 (02/18) (Power Component)	103.24 (5.62)	257.12	29.88
		2	33	2015-16							
		3	33	2015-16							
		4	33	2015-16							
		5	33	2015-16							
		6	33	2015-16							
		7	8	2015-16 (March, 16)							
Sikkim											
20	Teesta Stage VI (4x125 = 500 MW) NHPC	1	125	2012-13	2023-24 2023-24 2023-24 2023-24 (Jul'12)	140	3283.08 (Completion Cost)	5748.04 (07/2018)	2464.96 (75.08)	445	155.57
		2	125	2012-13							
		3	125	2012-13							
		4	125	2012-13 (Jul'12)							
21	Rangit-IV HE Project (3X40 = 120 MW) NHPC	1	40	2011-12	2024-25 2024-25 2024-25 (May'24)	148	737.28 (Completion Cost)	938.29 (10/19)	204.01 (27.78)	116.49	62.09
		2	40	2011-12 2011-							
		3	40	12 (Jan'12)							
Tamil Nadu											
22	Kundah PSP (Phase-I, Phase-II & Phase-III) (4x125=500 MW) TANGEDCO	1	125	2021-22	2023-24 2023-24 2023-24 2023-24 (Mar,24)	31	1216.59 (2007-08)	1831.29 (2014)	614.7 (50.52)	136.23	131.44
		2	125	2021-22							
		3	125	2021-22							
		4	125	2021-22 (Aug,21)							

Sl. No	Project Name/(I.C.)/ Executing Agency	Unit No.	Cap. (MW)	Org. Comm. Sched.	Ant. Comm. Sched.	Time over run (months)	Org. Cost (Rs. in Crores) (Price Level)	Latest/Ant. Cost (Rs. in Crores) (Price Level)	Cost over run (Rs. in Crores) (%)	EXPENDITUE DURING 2021-22 (in Crs.)	EXPENDITURE DURING 2022-23 (Upto June 22) (in Crs.)
Uttartakhand											
23	TapovanVishnughad (4x130 = 520 MW) NTPC	1	130	2012-13	2024-25	135	2978.48 (03/04)	5867.38 (04/19)	2888.90 (96.99)	366.56	150.59
		2	130	2012-13	2024-25						
		3	130	2012-13	2024-25						
		4	130	2012-13 (Mar'13)	2024-25 (Jun'24)						
24	Tehri PSS (4x250 = 1000 MW) THDC	1	250	2010-11	2022-23	155	1657.60 (12/05)	4825.60 (02/19)	3168 (191.12)	562.35	121.19
		2	250	2010-11	2023-24						
		3	250	2010-11	2023-24						
		4	250	2010-11 (July'10)	2023-24 (Jun'23)						
25	Naitwar Mori (2x30 = 60 MW) SJVNL	1	30	2021-22	2022-23	13	648.33 (10/2016)	947.89 (12/2020)	299.56 (46.20)	301	88.56
		2	30	2021-22 (Dec'21)	2022-23 (Jan'-23)						
26	Vishnugad Pipalkoti (4x111 = 444 MW) THDC	1	111	2013-14	2024-25	141	2491.58 (03/08)	3860.35 (02/19)	1368.77 (54.93)	261.37	104.71
		2	111	2013-14	2024-25						
		3	111	2013-14	2024-25						
		4	111	2013-14 (Jun'13)	2024-25 (Mar'25)						
West Bengal											
27	Rammam-III (3x40= 120 MW)	1	40	2019-20	2024-25	63	1381.84 (09/14)	1381.84 (09/14)	#	100.47	13.17
		2	40	2019-20	2024-25						
		3	40	2019-20 (Sep'19)	2024-25 (Dec,24)						

Note:- It is to mention that cost overrun has been calculated as the difference between the Latest Cost (provided by the developer to CEA alongwith the Price Level) and the Original Cost approved by the Central Government / State Government. In most of the cases the Latest cost at the current Price Level has not been provided by the developers.

Cost overrun could not be calculated due to non-availability of latest cost.

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1120
ANSWERED ON 26.07.2022

ENERGY STORAGE TECHNOLOGIES

1120 SHRI AYODHYA RAMI REDDY ALLA:

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

- (a) whether the Ministry has invested in any pilot project or test cases for energy storage technologies to accompany decentralised solar energy projects, if so, the details thereof and if not, the reasons therefor;
- (b) whether there is any policy or White Paper drafted on the matter by the Ministry, if so, the details thereof, and if not, the reasons therefor; and
- (c) whether any standalone energy storage systems have been granted electricity network connectivity under Electricity Rules issued last year, 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 (c): The Public sector undertakings of the Government has invested in commercial scale implementation of Battery Energy Storage Systems along with Solar PV Projects. The Government of India is also supporting some of the storage projects through grant support.

Solar Energy Corporation of India (SECI), a CPSE under the Ministry of New and Renewable Energy has undertaken the implementation of following three projects:

- (i) 1.4 MW Solar PV Project with 1.4 MWh Battery Energy Storage System in Kavaratti Island, UT of Lakshadweep (supported through MNRE Grant)
- (ii) 50 MWp SPV Project with 20 MW/50 MWh BESS at Phyang, Leh, UT of Ladakh (supported by GoI grant under the PMDP 2015)
- (iii) 100 MW SPV Project with 40 MW/120 MWh BESS at Rajnandgaon, State of Chhattisgarh.

Ministry of Power has notified Bidding Guidelines for Procurement and Utilization of Battery Energy Storage Systems as part of Generation, Transmission and Distribution assets, along with Ancillary Services on March 11, 2022. Energy Storage Projects at grid scale are currently under implementation stage.
