GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
STARRED QUESTION NO.169
ANSWERED ON 02.08.2022

ENERGY DEMAND OF THE COUNTRY

169 SHRI ANIL DESAI:

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

(a) the various sources of energy in the country and whether the supply of the same is sufficient to meet the energy demand of the country;

(b) the percentage of renewable energy available in the country;

(c) the total demand and supply of energy consumption from these sources; and

(d) to what extent green energy would help to overcome the situation in case any shortage of energy arises from the traditional sources?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

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

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STATEMENT

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) OF STARRED QUESTION NO. 169 ANSWERED IN THE RAJYA SABHA ON 02.08.2022 REGARDING ENERGY DEMAND OF THE COUNTRY.

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(a) to (c) : The energy demand in the country is met from various energy sources such as thermal, nuclear, hydel and other renewable etc. The source-wise generation capacity available from various energy sources viz. Thermal, Nuclear and Renewable Energy (including Hydro) as on 30.06.2022, were 236.06 Giga Watt (GW), 6.78 Giga Watt (GW) and 160.91 Giga Watt (GW) respectively. The percentage of Renewable Energy (RE) based installed capacity with respect of total capacity available in the country is 39.85%.

At present, there is adequate generation capacity available in the country. As on 30.06.2022, the generation capacity of the country was around **403.76 Giga Watt (GW),** against the Peak Power Demand of the country of around **215.89 Giga Watt (GW)**, which had occurred in the month of April, 2022 during the current year 2022-23 (Period, April 2022 to June, 2022). The details of All India Energy Requirement and Energy Supplied for the period April, 2022 to June, 2022 are given at **Annexure.**

(d): Government have set a target to achieve non-fossil based installed power capacity of 500 GW by 2030. As per the report on optimal generation capacity mix for 2029-30 published by CEA, the share of non-fossil based installed capacity would be 64.29% by 2030. The non-fossil and traditional sources would together meet the power requirement of the country.

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ANNEXURE

ANNEXURE REFERRED TO IN PARTS (a) TO (c) OF THE STATEMENT LAID IN REPLY TO STARRED QUESTION NO. 169 ANSWERED IN THE RAJYA SABHA ON 02.08.2022 REGARDING ENERGY DEMAND OF THE COUNTRY

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The details of All India Energy Requirement and Energy Supplied for the period April, 2022 to June, 2022.

	2022-23			
	Energy Requirement	Energy Supplied	Energy not Supplied	
Month	(MU)	(MU)	(MU)	(%)
April	134,781	132,028	2,752	2.0
May	135,765	135,156	609	0.4
June (*)	134,215	133,470	746	0.6
April to June 2022	**404,761**	**400,654**	**4107**	**1.0**

(***)- Provisional***

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GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1916
ANSWERED ON 02.08.2022

BUNDLED SOLAR AND THERMAL POWER

1916 DR. SANTANU SEN:

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

(a) the details of the power generators providing bundled solar and thermal power for 24x7 power supply;

(b) whether they are generating 51 per cent of power from renewable sources;

(c) if not, the reasons therefor;

(d) whether any power generator has paid penalty for not meeting 85 per cent power supply requirement annually and peak hour specified in the policy for procurement of round-the-clock power from grid-connected projects; and

(e) if so, the details thereof?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) to (e) : The guidelines regarding "Procurement of Round-The Clock (RTC) Power from Grid Connected Renewable Energy Power Projects, complemented with Power from Coal Based Thermal Power Projects" was issued by Ministry of Power (MoP), on 22nd July, 2020 and were amended in November, 2020; February, 2021 and February, 2022.

The Solar Energy Corporation of India Ltd (SECI) had issued the Request for Selection (RfS) document for Selection of RE Power Developers for Supply of 2500 MW RTC Power from Grid Connected RE Projects, complemented with Power from any other source or storage tender. In the aforementioned tender, 250 MW capacity was awarded to M/s Hindustan Thermal Projects Limited. As per the RfS conditions, the project will be generating more than 51% of power from RE once commissioned. Subsequent to project commissioning, provisions related to shortfall in meeting the performance criteria including payment of penalty will be applicable. At present no generator is providing RTC bundled solar and thermal power. Hence, the question of payment of penalty for not meeting 85 percent power supply requirement annually and peak hour does not arise.

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GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1917
ANSWERED ON 02.08.2022

DELAY IN POWER PROJECTS

1917 SMT. PRIYANKA CHATURVEDI:

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

(a) whether Government recognizes the delay in execution of the majority of power projects, as stated in the report "Delay in Execution/Completion of Power Projects by Power Sector Companies" presented by the Department related Parliamentary Standing Committee on Energy on 5th August, 2021;

(b) if so, the details thereof and Government's response thereto;

(c) whether Government has data regarding the delayed projects and the cause of delay along with the financial burden that it has caused;

(d) if so, the details thereof; and

(e) the steps to increase efficiency of Power sector companies through contractual guidelines, policy and regulatory support?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) to (e): Ministry of Power has noted the findings and recommendations stated in the report "Delay in Execution / Completion of Power Projects by Power Sector Companies" presented by the Department related Parliamentary Standing Committee on Energy on 5th August, 2021 and has taken appropriate actions on the same. The Action Taken Report has been submitted to Lok Sabha Secretariat on 04.01.2022.

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

• Contractual Issues

• Lack of readiness of railway lines / Railway sidings

• Delay in supply by equipment manufacturers

• Delay in land acquisitions

…….2.

• Disruption of work due to Local issues

• Litigations

• Delay due to changes 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.

- MoP has constituted Conciliation Committees of Independent Experts (CCIE), for timely settlement of disputes arising in contracts of CPSUs / Statutory Bodies executing power projects.

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GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1918
ANSWERED ON 02.08.2022

PLAN TO TACKLE POWER CRISIS

1918 DR. AMEE YAJNIK:

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

(a) whether it is a fact that India is facing the worst power crisis in the last three years, which has led to widespread power cuts;

(b) if so, the main reasons behind it and whether Government has any concrete plan to deal with this problem;

(c) the details of energy generation sources in the country, State-wise; and

(d) whether we can become less dependent on thermal energy while simultaneously increasing some other alternative source of energy?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) to (c) : At present, there is adequate generation capacity available in the country. As on 30.06.2022, the generation capacity of the country was around **403.76 Giga Watt (GW),** while the Peak Power Demand of the country was around **215.89 Giga Watt (GW)**, (April, 2022). The details of actual All India Power Supply Position during the last three years i.e. 2019-20 to 2021-22 are given at **Annexure-I.**

The gap between Energy Requirement and Energy Supplied was 4.2 percent in 2013-14, which has been brought down to 0.4% in 2021-22 and this is generally on account of factors, other than adequacy of power availability in the country e.g. constraints in distribution network, financial constraints, commercial reasons, outages of generating units etc.

The details of installed capacity of various energy generation sources in the country, are given at **Annexure-II.**

(d) : The Generation Expansion Planning studies carried out by the CEA for 2029-30 reveal that the share of non-fossil fuel based generation capacity in the total installed capacity of the Country is likely to increase from around 41% as on June, 2022 to more than 64% by 2029-30. Further, the share of non-fossil in the generation mix of the country which stands at 28% as on June, 2022 is likely to increase to more than 45% by 2029-30. This would reduce the dependence on fossil fuel based thermal plants.

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ANNEXURE-I

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (c) OF UNSTARRED QUESTION NO. 1918 ANSWERED IN THE RAJYA SABHA ON 02.08.2022

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The details of actual All India Power Supply position during the last three years i.e. 2019-20 to 2021-22

Year	ENERGY [in Million Units (MU)]			
	Energy Requirement	Energy Supplied	Energy not Supplied	
	(MU)	(MU)	(MU)	(%)
2019-20	1,291,010	1,284,444	6,566	0.5
2020-21	1,275,534	1,270,663	4,871	0.4
2021-22	1,379,812	1,374,024	5,787	0.4

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ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (c) OF UNSTARRED QUESTION NO. 1918 ANSWER ED IN THE RAJYA SABHA ON 02.08.2022

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State-wise Installed Capacity (As on 30-June-2022)

Figures in MW

S.No.	Region / State	Fossil Fuel					Non-Fossil Fuel					Grand Total
							Total RES (Including Hydro)				Total Non-Fossil Fuel	
		Coal	Lignite	Gas	Diesel	Total Fossil Fuel	Hydro	Solar, Wind & Other RES	Total RES (Incl. Hydro)	Nuclear		
		1	2	3	4	5=1+2+3+4	6	7	8=6+7	9	10=8+9	11=5+10
1	Chandigarh	0	0	0	0	**0**	0	57	57	0	**57**	**57**
2	Delhi	0	0	2208	0	**2208**	0	270	270	0	**270**	**2479**
3	Haryana	5330	0	432	0	**5762**	0	1275	1275	0	**1275**	**7037**
4	Himachal Pradesh	0	0	0	0	**0**	10263	1045	11308	0	**11308**	**11308**
5	Jammu & Kashmir	0	0	175	0	**175**	3360	193	3553	0	**3553**	**3728**
6	Ladakh	0	0	0	0	**0**	89	47	136	0	**136**	**136**
7	Punjab	5680	0	0	0	**5680**	1096	1786	2882	0	**2882**	**8562**
8	Rajasthan	8900	1580	1023	0	**11503**	411	19099	19510	1180	**20690**	**32193**
9	Uttar Pradesh	24389	0	1493	0	**25882**	502	4484	4985	440	**5425**	**31307**
10	Uttarakhand	0	0	450	0	**450**	3975	932	4907	0	**4907**	**5357**
	Northern Region	**44299**	**1580**	**5781**	**0**	**51660**	**19696**	**29188**	**48884**	**1620**	**50504**	**102164**
11	Chhattisgarh	23688	0	0	0	**23688**	120	880	1000	0	**1000**	**24688**
12	Gujarat	14692	1400	7551	0	**23643**	1990	17425	19415	440	**19855**	**43498**
13	Madhya Pradesh	21950	0	0	0	**21950**	2235	5497	7732	0	**7732**	**29682**
14	Maharashtra	23856	0	3207	0	**27063**	3047	10779	13826	1400	**15226**	**42289**
15	D.N.H. and D.D.	0	0	0	0	**0**	0	46	46	0	**46**	**46**
16	Goa	0	0	48	0	**48**	0	22	22	0	**22**	**70**
	Western Region	**84186**	**1400**	**10806**	**0**	**96392**	**7392**	**34650**	**42042**	**1840**	**43882**	**140275**
17	Andhra Pradesh	11590	0	4899	37	**16525**	1610	9215	10825	0	**10825**	**27351**
18	Telangana	7843	0	0	0	**7843**	2406	5060	7465	0	**7465**	**15308**
19	Karnataka	9480	0	0	25	**9505**	3689	15963	19652	880	**20532**	**30037**
20	Kerala	0	0	534	160	**694**	1864	871	2735	0	**2735**	**3429**
21	Tamil Nadu	10045	3640	1027	212	**14924**	2178	16772	18950	2440	**21390**	**36314**
22	Puducherry	0	0	33	0	**33**	0	36	36	0	**36**	**68**
23	Lakshadweep	0	0	0	0	**0**	0	3	3	0	**3**	**3**
	Southern Region	**38958**	**3640**	**6492**	**434**	**49523**	**11747**	**47920**	**59667**	**3320**	**62987**	**112510**
24	Bihar	8400	0	0	0	**8400**	0	387	387	0	**387**	**8787**
25	Jharkhand	4250	0	0	0	**4250**	210	97	307	0	**307**	**4557**
26	Odisha	9540	0	0	0	**9540**	2155	627	2782	0	**2782**	**12322**
27	West Bengal	13697	0	80	0	**13777**	1341	597	1938	0	**1938**	**15715**
28	Sikkim	0	0	0	0	**0**	2282	60	2342	0	**2342**	**2342**
29	Andaman- & Nicobar Islands	0	0	0	40	**40**	0	35	35	0	**35**	**75**
	Eastern Region	**35887**	**0**	**80**	**40**	**36007**	**5988**	**1803**	**7791**	**0**	**7791**	**43798**
30	Arunachal Pradesh	0	0	0	0	**0**	1115	144	1259	0	**1259**	**1259**
31	Assam	750	0	597	0	**1347**	350	179	529	0	**529**	**1876**
32	Manipur	0	0	0	36	**36**	105	18	123	0	**123**	**159**
33	Meghalaya	0	0	0	0	**0**	322	50	372	0	**372**	**372**
34	Mizoram	0	0	0	0	**0**	60	44	104	0	**104**	**104**
35	Nagaland	0	0	0	0	**0**	75	35	110	0	**110**	**110**
36	Tripura	0	0	1100	0	**1100**	0	32	32	0	**32**	**1131**
	North-Eastern Region	**750**	**0**	**1697**	**36**	**2483**	**2027**	**503**	**2530**	**0**	**2530**	**5013**
	All India	**204080**	**6620**	**24856**	**510**	**236065**	**46850**	**114064**	**160914**	**6780**	**167694**	**403760**

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GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1919
ANSWERED ON 02.08.2022

ELECTRICITY GENERATION FROM RENEWABLE ENERGY SOURCES

1919 # SHRI VIVEK K. TANKHA:

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

(a) whether the Central Electricity Authority has set a target to generate 48 per cent electricity out of the total utilised electricity from renewable energy sources by the year 2029-30; and

(b) if so, the steps being taken by Government to achieve this goal?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) : **A** study was carried out by Central Electricity Authority, Ministry of Power with an objective to project the Optimal Generation Capacity mix for 2029-30, the results of which were published in January, 2020. According to the study, the estimated electricity generation from renewable energy sources was assessed to be 39% of the total electricity generation by the year 2029-30.

(b) : Government have taken several steps to promote renewable energy in the country to achieve the goal of 500 GW of non-fossil fuel capacity by 2030, in line with Hon'ble Prime Minister's announcement at CoP-26. These include:

- permitting Foreign Direct Investment (FDI) up to 100 percent under the automatic route,
- waiver of Inter State Transmission System (ISTS) charges for inter-state sale of solar and wind power for projects to be commissioned by 30th June 2025,
- declaration of trajectory for Renewable Purchase Obligation (RPO) up to the year 2030,

…….2.

- setting up of Ultra Mega Renewable Energy Parks to provide land and transmission to RE developers on a plug and play basis,
- schemes such as Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM), Solar Rooftop Phase II, 12000 MW CPSU Scheme Phase II, etc,
- laying of new transmission lines and creating new sub-station capacity under the Green Energy Corridor Scheme for evacuation of renewable power,
- setting up of Project Development Cell for attracting and facilitating investments,
- Standard Bidding Guidelines for tariff based competitive bidding process for procurement of Power from Grid Connected Solar PV and Wind Projects.
- Government has issued orders that power shall be dispatched against Letter of Credit (LC) or advance payment to ensure timely payment by distribution licensees to RE generators.

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GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.1920
ANSWERED ON 02.08.2022

INTEGRATED POWER DEVELOPMENT SCHEME (IPDS) IN TAMIL NADU

1920 SHRI P. WILSON:

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

(a) whether the Ministry has details of the funds allotted and disbursed under the Integrated Power Development Scheme (IPDS) across the country especially in Tamil Nadu;

(b) whether the Ministry has collected data on how many sub-transmission and distribution networks were strengthened under the IPDS from across the country especially in Tamil Nadu; and

(c) 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) : Under Integrated Power Development Scheme (IPDS), projects worth Rs.28,886 Crore [with Government of India (GoI) Grant of Rs.18089 Crore] were sanctioned, against which, GoI grant of Rs.17638 Crore had been released to the States/UTs. Under this Scheme, GoI grant of Rs.1051 Crore was sanctioned for Tamil Nadu, against which, Rs.1044 Crore had been disbursed to the State**.** The Scheme closed on 31.03.2022.

(b) & (c) : Under IPDS, Sub-transmission & Distribution Strengthening Projects sanctioned in 546 Circles have been declared complete by DISCOMs across the Country within the sunset timeline of March, 2022. Further, system strengthening works, GIS Substation and ERP works were sanctioned to TANGEDCO, Tamil Nadu. Sub-transmission & Distribution Strengthening Projects sanctioned in 37 Circles, covering 522 towns, work for 7 GIS Substation and ERP works have been declared complete by TANGEDCO. The details of infrastructure created under IPDS in the Country along with the implementation status in the State of Tamil Nadu are furnished at **Annexure.**

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ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PARTS (b) & (c) OF UNSTARRED QUESTION NO. 1920 ANSWERED IN THE RAJYA SABHA ON 02.08.2022

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Major infrastructure created under IPDS in the Country

Items (Unit)	Achievement
New Power Sub Station (Nos.)	994
Installation of New Distribution Transformer (Nos.)	60,001
HT Lines (cKm)	23,539
LT Lines (cKm)	10,409
AB Cable (cKm)	64,364
UG Cable (cKm)	21,336
Roof Top Solar Panels (kWp)	46,107
IT enablement of smaller towns	Declared complete in 33 DISCOMs
ERP for improving operational efficiencies	Implemented in 32 Discoms
RT-DAS for tracking reliability indices	Declared completed in 21 DISCOMs
Smart meters	8.1 lakh installed
Work in GIS Substations in land constrained urban areas	Declared completed in 92 nos.

Source: PFC

Major works executed under IPDS in Tamil Nadu

BOQ	Unit	Quantum
33/11 KV New Sub-stations	Nos	68-Conventional Substations & 7-GIS Substations
Augmentation of Sub-stations	Nos	41
Installation of New Distribution Transformer	Nos	1094
New HT Lines	cKm	4266
New LT Lines	cKm	1747
UG Cable	cKm	1747
AB Cable	cKm	153
Solar Panels	kWp	2082

Source: PFC

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