GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.951
ANSWERED ON08.12.2025

OPERATIONAL STATUS OF THERMAL POWER PLANTS

951 SHRI SATNAM SINGH SANDHU:

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

(a) the total number of thermal power plants currently operational in the country, along withtheir State-wise and capacity-wise details;

(b) the details of new thermal power plants commissioned during the last five years andthose under construction or in the pipeline;

(c) the total installed capacity of thermal power generation in the country and its share inthe overall energy mix;

(d) whether Government has any plan to modernize or phase out old and inefficient thermalpower plants and if so, the details thereof; and

(e) the steps taken to reduce carbon emissions and environmental impact of coal-basedthermal power generation?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): The total number of thermal power plants currently operational in the country is 280 and their State-wise, Plant-wise and Capacity-wise details are given at **Annexure-I.**

(b): Thermal capacities of 27,709 MW have been commissioned during the last five years and in current year till 30.11.2025 and their details are given at **Annexure-II**. In addition, 40,345 MW of thermal capacity is currently under construction and their details are given at **Annexure-III**.

Further, contracts of 22,920 MW thermal capacity have been awarded and is due for construction and their details are given at **Annexure-IV.** Thermal Capacity of 5,320 MW is under bidding/pipeline and their details are given at **Annexure-V.**

(c): As on 31.10.2025, the total installed capacity of thermal power generation in the country and its share in the overall energy mix are given below:

Category		**Installed Capacity (MW)**	**% Share in Total**
Fossil Fuel	Coal	2,18,258	43.22%
	Lignite	6,620	1.31%
	Gas	20,132	3.99%
	Deisel	589	0.12%
	Total Fossil Fuel Based Capacity	**2,45,600**	**48.63%**

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(d): The Central Electricity Authority (CEA) has issued an advisory dated 20.01.2023 and 07.07.2023 to all Thermal Power Utilities not to retire or repurpose their coal-based power stations before 2030 and to ensure the availability of thermal units after carrying out Renovation and Modernization(R&M) activities, if required, considering the expected energy demand scenario in future.

Further, electricity generation is a de-licensed activity as per Section-7 of the Electricity Act, 2003 and phasing out/ retirement of units are decided by Power Generating Utilities /Companies based on their own techno-economic and environmental considerations.

(e): In order to reduce carbon emissions and environmental impact of coal-based thermal power generation, the Government is taking following steps:

(i) Ministry of Power is promoting installation of efficient Supercritical/ Ultra Supercritical units which are more efficient and leading to reduced CO_2 emission per unit of electricity generation. A total capacity of Supercritical/ Ultra-supercritical units of 70,190 MW (101 Units) and 7,680 MW (11 units) have been commissioned respectively till 31.10.2025

(ii) To improve the energy efficiency, the Perform Achieve and Trade (PAT) scheme has been implemented in various thermal power plants. Improvement in energy efficiency reduces carbon dioxide emission in thermal power generation.

(iii) Ministry of Power has issued a comprehensive policy on 07.11.2025 for co-firing of Bio-mass pellets [including torrefied charcoal made from Municipal Solid Waste (MSW)] in Coal Based Power Plants to use 5-7% blend of biomass pellets and/or MSW-based torrefied charcoal along with coal, after assessing the technical feasibility.

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

(v) NTPC Ltd. has commissioned a 20 TonnesPer Day (TPD) capacity Pilot Carbon Capture Project at its Vindhayachal Thermal Power Station

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ANNEXURE-I

ANNEXURE REFERRED IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 951 ANSWERED IN THE RAJYA SABHA ON 08.12.2025

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State-wise & Capacity-wise Thermal Power Stations as on 31.10.2025

Sl No	Thermal Power Station	Capacity (in MW)
Andaman & Nicobar		**92.71**
1	AND. NICOBAR DG	57.52
2	AND. NICOBAR Pvt. DG	35.19
Andhra Pradesh		**15,666.2**
3	DAMODARAM SANJEEVAIAH TPS	2,400
4	Dr. N.TATA RAO TPS	2,560
5	GAUTAMI CCPP	0
6	GODAVARI CCPP	0
7	GREL CCPP (Rajahmundry)	768
8	JEGURUPADU CCPP PH I	235.4
9	JEGURUPADU CCPP PH II	0
10	JINDAL POWER LIMITED SIMHAPURI	600
11	KONASEEMA CCPP	0
12	KONDAPALLI CCPP	0
13	KONDAPALLI EXTN CCPP	366
14	KONDAPALLI ST-3 CCPP	0
15	LVS POWER DG	36.8
16	PAINAMPURAM TPP	1320
17	PEDDAPURAM CCPP	0
18	RAYALASEEMA TPS	1650
19	SGPL TPP	1320
20	SIMHADRI	2,000
21	THAMMINAPATNAM TPS	1,000
22	VEMAGIRI CCPP	370
23	VIJJESWARAM CCPP	0
24	VIZAG TPP	1,040
Assam		**1,347.355**
25	BONGAIGAON TPP	750
26	KATHALGURI CCPP	291
27	LAKWA GT	97.2
28	LAKWA REPLACEMENT POWER PROJECT	69.7
29	NAMRUP CCPP	139.4
Bihar		**9,510**
30	BARAUNI TPS	500
31	BARH STPS	3,300
32	KAHALGAON TPS	2,340
33	MUZAFFARPUR TPS	390
34	NABINAGAR STPP	1,980

35	NABINAGAR TPP	1,000
Chhattisgarh		**24,093**
36	ADANI POWER LIMITED RAIGARH TPP	600
37	ADANI POWER LIMITED RAIPUR TPP	1,370
38	AKALTARA TPS	1,800
39	BALCO TPS	600
40	BANDAKHAR TPP	300
41	BARADARHA TPS	1,200
42	BHILAI TPS	500
43	BINJKOTE TPP	600
44	CHAKABURA TPP	30
45	DSPM TPS	500
46	KASAIPALLI TPP	270
47	KATGHORA TPP	0
48	KORBA STPS	2,600
49	KORBA-WEST TPS	1,340
50	LARA TPP	1,600
51	MARWA TPS	1,000
52	NAWAPARA TPP	600
53	OP JINDAL TPS	1,000
54	PATHADI TPP	600
55	RATIJA TPS	100
56	SALORA TPP	0
57	SIPAT STPS	2,980
58	SVPL TPP	63
59	SWASTIK KORBA TPP	0
60	TAMNAR TPP	2,400
61	UCHPINDA TPP	1,440
62	Vedanta Ltd Chhattisgarh TPP	600
Delhi		**2,100.4**
63	I.P.CCPP	270
64	PRAGATI CCGT-III	1,500
65	PRAGATI CCPP	330.4
66	RITHALA CCPP	0
Goa		**0**
67	GOA CCPP (Liq.)	0
Gujarat		**22,672.31**
68	ADANI POWER LIMITED MUNDRA TPP – I & II	2,640
69	ADANI POWER LIMITED MUNDRA TPP – III	1,980
70	AKRIMOTA LIG TPS	250
71	BARODA CCPP	0
72	BHAVNAGAR CFBC TPP	500
73	DGEN MEGA CCPP	1,200
74	DHUVARAN CCPP	594.72

75	ESSAR CCPP	515
76	GANDHAR CCPP	657.39
77	GANDHI NAGAR TPS	630
78	HAZIRA CCPP	0
79	HAZIRA CCPP EXT	351
80	KAWAS CCPP	656.2
81	KUTCH LIG. TPS	150
82	MUNDRA UMTPP	4,000
83	PIPAVAV CCPP	702
84	SABARMATI (D-F STATIONS)	362
85	SALAYA TPP	1,200
86	SIKKA REP. TPS	500
87	SUGEN CCPP	1,147.5
88	SURAT LIG. TPS	500
89	UKAI TPS	1,110
90	UNOSUGEN CCPP	382.5
91	UTRAN CCPP	374
92	WANAKBORI TPS	2,270
Haryana		**5,761.59**
93	FARIDABAD CCPP	431.59
94	INDIRA GANDHI STPP	1,500
95	MAHATMA GANDHI TPS	1,320
96	PANIPAT TPS	710
97	RAJIV GANDHI TPS	1,200
98	YAMUNA NAGAR TPS	600
Jammu & Kashmir		**0**
99	PAMPORE GPS (Liq.)	0
Jharkhand		**7,030**
100	BOKARO TPS `A` EXP	500
101	CHANDRAPURA(DVC) TPS	500
102	JOJOBERA TPS	240
103	KODARMA TPP	1,000
104	MAHADEV PRASAD STPP	540
105	MAITHON RB TPP	1,050
106	NORTH KARANPURA STPP	1,980
107	PATRATU STPP	800
108	TENUGHAT TPS	420
Karnataka		**9,875.25**
109	ADANI POWER LIMITED UDUPI TPP	1,200
110	BELLARY DG	25.2
111	BELLARY TPS	1,700
112	KUDGI STPP	2,400
113	RAICHUR TPS	1,720
114	TORANGALLU TPS(SBU-I)	260
115	TORANGALLU TPS(SBU-II)	600
116	YELAHANKA CCPP	370.05

117	YERMARUS TPP	1600
Kerala		**519.54**
118	BRAMHAPURAM DG	63.96
119	COCHIN CCPP (Liq.)	0
120	KOZHIKODE DG	96
121	R. GANDHI CCPP (Liq.)	359.58
Lakshadweep		**26.83**
122	Lakshadweep DG	26.83
Madhya Pradesh		**21,170**
123	AMARKANTAK EXT TPS	210
124	ANUPPUR TPP	1,250
125	BINA TPS	500
126	GADARWARA TPP	1,600
127	KHARGONE STPP	1,320
128	MAHAN TPP	1,200
129	NIGRI TPP	1,320
130	NIWARI TPP	90
131	SANJAY GANDHI TPS	1,340
132	SASAN UMTPP	3,960
133	SATPURA TPS	500
134	SEIONI TPP	600
135	SHREE SINGAJI TPP	2,520
136	VINDHYACHAL STPS	4,760
Maharashtra		**26,135.08**
137	ADANI POWER LIMITED TIRODA TPP	3,300
138	AMRAVATI TPS	1,350
139	BELA TPS	270
140	BHUSAWAL TPS	1,870
141	BUTIBORI TPP	600
142	CHANDRAPUR(MAHARASHTRA) STPS	2,920
143	DAHANU TPS	500
144	DHARIWAL TPP	600
145	GEPL TPP Ph-I	120
146	GMR WARORA TPS	600
147	JSW RATNAGIRI TPP	300
148	KHAPARKHEDA TPS	1,340
149	KORADI TPS	2,190
150	MANGAON CCPP	0
151	MAUDA TPS	2,320
152	MIHAN TPS	246
153	NASIK (P) TPS	0
154	NASIK TPS	630
155	PARAS TPS	500
156	PARLI TPS	750

157	RATNAGIRI CCPP	1,967.08
158	SHIRPUR TPP	300
159	SOLAPUR STPS	1,320
160	TROMBAY CCPP	180
161	TROMBAY TPS	750
162	URAN CCPP	672
163	WARDHA WARORA TPP	540
Manipur		**36**
164	LEIMAKHONG DG	36
Odisha		**9,950**
165	DARLIPALI STPS	1,600
166	DERANG TPP	1,200
167	IB VALLEY TPS	1,740
168	JSW Energy Utkal Limited	700
169	KAMALANGA TPS	1,050
170	Maadurga Thermal Power Company Ltd.	60
171	TALCHER STPS	3,000
172	VEDANTA TPP	600
Puducherry		**32.5**
173	KARAIKAL CCPP	32.5
Punjab		**5,680**
174	GH TPS (LEH.MOH.)	920
175	GOINDWAL SAHIB TPP	540
176	RAJPURA TPP	1,400
177	ROPAR TPS	840
178	TALWANDI SABO TPP	1,980
Rajasthan		**11,802.83**
179	ADANI POWER LIMITED KAWAI TPP	1,320
180	ANTA CCPP	419.33
181	BARSINGSAR LIGNITE	250
182	CHHABRA-I PH-1 TPP	500
183	CHHABRA-I PH-2 TPP	500
184	CHHABRA-II TPP	1,320
185	DHOLPUR CCPP	330
186	GIRAL TPS	250
187	JALIPA KAPURDI TPP	1,080
188	KALISINDH TPS	1,200
189	KOTA TPS	1,240
190	RAMGARH CCPP	273.5
191	SHREE CEMENT LTD TPS	300
192	SURATGARH STPS	1,320
193	SURATGARH TPS	1,500
Tamil Nadu		**15,228.781**
194	BASIN BRIDGE GT (Liq.)	120
195	ITPCL TPP	1,200
196	KARUPPUR CCPP	0
197	KOVIKALPAL CCPP	107.88

198	KUTTALAM CCPP	100
199	METTUR TPS	840
200	METTUR TPS-II	600
201	MUTHIARA TPP	1,200
202	NARIMANAM GPS	10
203	NEYVELI (EXT) TPS	420
204	NEYVELI NEW TPP	1,000
205	NEYVELI TPS(Z)	250
206	NEYVELI TPS-II	1,470
207	NEYVELI TPS-II EXP	500
208	NORTH CHENNAI TPS STAGE 1	630
209	NORTH CHENNAI TPS STAGE 2	1,200
210	NTPL TUTICORIN TPP	1,000
211	OPG Power Generation Private Limited	414
212	P.NALLUR CCPP	330.5
213	SAMALPATTI DG	105.7
214	SAMAYANALLUR DG	106.001
215	TCP Limited	63.5
216	TUTICORIN (P) TPP	300
217	TUTICORIN TPP ST-IV	525
218	TUTICORIN TPS	1,050
219	VALANTARVY CCPP	0
220	VALLUR TPP	1,500
221	VALUTHUR CCPP	186.2
Telangana		**11,042.5**
222	BHADRADRI TPP	1,080
223	KAKATIYA TPS	1,100
224	KOTHAGUDEM TPS (NEW)	1,000
225	KOTHAGUDEM TPS (STAGE-7)	800
226	RAMAGUNDEM STPS	2,600
227	RAMAGUNDEM-B TPS	62.5
228	SINGARENI TPP	1,200
229	TELANGANA STPP PH-1	1,600
230	YADADRI TPS	1,600
Tripura		**1,067.6**
231	AGARTALA GT	135
232	BARAMURA GT	42
233	MONARCHAK CCPP	101
234	ROKHIA GT	63
235	TRIPURA CCPP	726.6
Uttar Pradesh		**30,848.14**
236	ANPARA C TPS	1,200
237	ANPARA TPS	2,630
238	AURAIYA CCPP	663.36
239	BARKHERA TPS	90
240	DADRI (NCTPP)	1,820
241	DADRI CCPP	829.78

242	GHATAMPUR TPP	660
243	HARDUAGANJ TPS	1,265
244	JAWAHARPUR STPP	1,320
245	KHAMBARKHERA TPS	90
246	KHURJA STPP	1,320
247	KUNDARKI TPS	90
248	LALITPUR TPS	1,980
249	MAQSOODPUR TPS	90
250	MEJA STPP	1,320
251	OBRA TPS	2,320
252	PANKI TPS EXT	660
253	PARICHHA TPS	920
254	PRAYAGRAJ TPP	1,980
255	RIHAND STPS	3,000
256	ROSA TPP Ph-I	1,200
257	SINGRAULI STPS	2,000
258	TANDA TPS	1,760
259	UNCHAHAR TPS	1,550
260	UTRAULA TPS	90
Uttarakhand		**664**
261	GAMA CCPP	225
262	SRAVANTHI CCPP	439
West Bengal		**13,247**
263	BAKRESWAR TPS	1,050
264	BANDEL TPS	270
265	BUDGE BUDGE TPS	750
266	D.P.L. TPS	550
267	DISHERGARH TPP	12
268	DURGAPUR STEEL TPS	1,000
269	FARAKKA STPS	2,100
270	HALDIA GT (Liq.)	0
271	HALDIA TPP	600
272	HIRANMAYE TPP	300
273	KASBA GT (Liq.)	0
274	KOLAGHAT TPS	840
275	MEJIA TPS	2,340
276	RAGHUNATHPUR TPP	1,200
277	SAGARDIGHI TPS	1,600
278	SANTALDIH TPS	500
279	SOUTHERN REPL. TPS	135
280	TITAGARH TPS	0
Grand Total		**2,45,599.616**

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ANNEXURE-II

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 951 ANSWERED IN THE RAJYA SABHA ON 08.12.2025

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Details of Thermal Power Projects commissioned from 01.04.2020 to 30.11.2025

Sl. No	Sector	State	Project Name	Implementing Agency	Unit No	Capacity (MW)
FY 2020-21						
1	Central	Tamil Nadu	Neyveli New TPP	NLC	U-2	500
2	Central	Uttar Pradesh	Tanda St-II	NTPC	U-6	660
3	Central	Uttar Pradesh	Meja STPP	JV of NTPC & UPRVUNL	U-2	660
4	Central	Chhattisgarh	Lara STPP	NTPC	U-2	800
5	Central	Madhya Pradesh	Gadarwara STPP	NTPC	U-2	800
6	Central	Bihar	Nabi Nagar STPP	NPGCL	U-2	660
7	State	Telangana	Bhadradri TPP	TSGENCO	U-2	270
8	State	Telangana	Bhadradri TPP	TSGENCO	U-3	270
Sub Total FY 2020-21						**4,620**
FY 2021-22						
9	Central	Bihar	Nabi Nagar TPP	BRBCL(JV of NTPC/Railway)	U-4	250
10	Central	Odisha	Darlipalli STPP St-I	NTPC	U-2	800
11	Central	Bihar	Nabi Nagar STPP	NPGCL	U-3	660
12	Central	Bihar	Barh STPP, Stage-I	NTPC	U-1	660
13	State	Uttar Pradesh	HarduaganjExpn-II	UPRVUNL	U-1	660
14	State	Rajasthan	Suratgarh SCTPP	RRVUNL	U-8	660
15	State	Telangana	Bhadradri TPP	TSGENCO	U-4	270
16	Private	Tamil Nadu	Tuticorin TPP, St-IV	SEPC	U-1	525
Sub Total FY 2021-22						**4,485**
FY 2022-23						
17	Central	Jharkhand	North Karanpura STPP	NTPC	U-1	660
18	State	Andhra Pradesh	Sri DamodaramSanjeevaiah TPP St-II	APPDCL	U-1	800
Sub Total FY 2022-23						**1,460**
FY 2023-24						
19	Central	Telangana	Telangana STPP St- I	NTPC	U-2	800
20	Central	Jharkhand	North Karanpura STPP	NTPC	U-2	660
21	Central	Bihar	Barh STPP St-I	NTPC	U-2	660
22	Central	Telangana	Telangana STPP St- I	NTPC	U-1	800

23	State	Andhra Pradesh	Dr.Narla Tata Rao TPS St-V	APGENCO	U-8	800
24	State	Uttar Pradesh	Obra-C STPS	UPRVUNL	U-1	660
25	State	Uttar Pradesh	Jawaharpur STPP	UPRVUNL	U-1	660
26	Private	Uttarakhand	Kashipur CCPP, Ph-II (M/s SEPL)	SEPL	Mod-2	214
27	Private	Maharashtra	Shirpur Power Pvt. Ltd.	M/s Jindal Power Ltd.	U-2	150
Sub Total FY 2023-24						**5,404**
FY 2024-25						
28	Central	Uttar Pradesh	Ghatampur TPP	NUPPL	U-1	660
29	Central	Uttar Pradesh	Khurja STPP	THDC	U-1	660
30	State	Uttar Pradesh	Jawaharpur STPP	UPRVUNL	U-2	660
31	State	Karnataka	Yelahanka CCPP	KPCL	GT+ST	370
32	State	Telangana	Yadadari TPS	TGGENCO	U-2	800
33	State	Maharashtra	Bhusawal TPP	MAHAGENCO	U-6	660
34	State	Uttar Pradesh	Panki TPP	UPRVUNL	U-1	660
35	Private	Odisha	MaaDurga Thermal Power Company Ltd	MTPCL	U-2	30
36	Private	Odisha	MaaDurga Thermal Power Company Ltd	MTPCL	U-1	30
Sub Total FY 2024-25						**4,530**
FY 2025-26 (till 30.11.2025)						
38	Central	Jharkhand	North Karanpura STPP	NTPC	U-3	660
39	Central	Bihar	Barh STPP , St-I	NTPC	U-3	660
40	Central	Uttar Pradesh	Khurja SCTPP	THDC	U-2	660
41	Central	Jharkhand	Patratu STPP	PVUNL	U-1	800
42	Central	Bihar	Buxar STPP	SJVN	U-1	660
43	Central	Uttar Pradesh	Ghatampur TPP	NUPPL	U-2	660
44	State	Uttar Pradesh	Obra-C STPS	UPRVUNL	U-2	660
45	State	Telangana	Yadadari TPS	TGGENCO	U-1	800
46	Private	Chhattisgarh	Vedanta Ltd Chhattisgarh TPP	Vedanta Ltd	U-1	600
47	Private	Odisha	Ind Bharat TPP	JSWEUL	U-2	350
48	Private	Andhra Pradesh	Meenakshi Energy Ltd. (Thamminapatanam TPP)	Vedanta Ltd	U-3	350
Sub Total FY 2025-26 (till 30.11.2025)						**7,210**
Grand Total						**27,709**

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ANNEXURE-III

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 951 ANSWERED IN THE RAJYA SABHA ON 08.12.2025

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Under Construction Thermal Projects as on 30.11.2025

Sl.No	Project Name / Implementing Agency	State	Sector	Unit No.	Capacity (MW)
1	Buxar TPP (SJVN)	Bihar	CENTRAL	U-2	660
2	Nabinagar STPP, St-II (NTPC)		CENTRAL	U-4	800
3			CENTRAL	U-5	800
4			CENTRAL	U-6	800
5	Korba TPP, Ph-II (LancoAmarkantak TPP),M/s Adani Power	Chhattisgarh	PRIVATE	U-3	660
6			PRIVATE	U-4	660
7	Singhitarai TPP, (M/s Vedanta)		PRIVATE	U-2	600
8	Lara STPP St-II (NTPC)		CENTRAL	U-3	800
9			CENTRAL	U-4	800
10	Raipur Ext TPP, Ph-II /Adani Power		PRIVATE	U-3	800
11			PRIVATE	U-4	800
12	Raigarh USCTPP, St-II/ Adani Power		PRIVATE	U-2	800
13			PRIVATE	U-3	800
14	Korba(W) SCTPP (CSPGCL)		STATE	U-1	660
15			STATE	U-2	660
16	Sipat STPP, St-III (NTPC)		CENTRAL	U-1	800
17	Akaltara TPP, JSW Energy		PRIVATE	U-4	600
18			PRIVATE	U-5	600
19			PRIVATE	U-6	600
20	Binjkote TPP, M/s Sarda Energy Mineral		PRIVATE	U-3	300
21			PRIVATE	U-4	300
22	Ukai TPP/GSECL	Gujarat	STATE	U-7	800
23	DCR TPP Ext., /HPGCL	Haryana	STATE	U-1	800
24	Patratu STPP (PVUNL)	Jharkhand	CENTRAL	U-2	800
25			CENTRAL	U-3	800
26	Koderma TPS, St-II/ DVC		CENTRAL	U-1	800
27			CENTRAL	U-2	800
28	Gadarwara STPP, Ph-II(NTPC)	Madhya Pradesh	CENTRAL	U-3	800
29			CENTRAL	U-4	800
30	Mahan STPP,St-II (Mahan Energen)		PRIVATE	U-3	800
31			PRIVATE	U-4	800
32	Mahan STPP,St-III (Mahan Energen)		PRIVATE	U-5	800
33			PRIVATE	U-6	800
34	KoradiTPS,St-V (MSPGCL)	Maharashtra	STATE	U-11	660
35			STATE	U-12	660
36	Malibrahmani TPP, M/s Jindal Power	Odisha	PRIVATE	U-2	525

37	Talcher TPP St-III (NTPC)		CENTRAL	U-1	660
38			CENTRAL	U-2	660
39	NLC TALABIRA TPP (NLC)		CENTRAL	U-1	800
40			CENTRAL	U-2	800
41			CENTRAL	U-3	800
42	North Chennai TPP, St-III (TNPGCL)	Tamil Nadu	STATE	U-6	800
43	Udangudi STPP St-I (TNPGCL)		STATE	U-1	660
44			STATE	U-2	660
45	Ennore SCTPP (TNPGCL)		STATE	U-1	660
46			STATE	U-2	660
47	Yadadri TPS (TGGENCO)	Telangana	STATE	U-4	800
48			STATE	U-3	800
49			STATE	U-5	800
50	SingareniTPP,Ph-II/SCCL		STATE	U-3	800
51	Ghatampur TPP (NUPPL)	Uttar Pradesh	CENTRAL	U-3	660
52	Singrauli STPP, St-III (NTPC)		CENTRAL	U-8	800
53			CENTRAL	U-9	800
54	Raghunathpur TPS, Ph-II/DVC	West Bengal	CENTRAL	U-3	660
55			CENTRAL	U-4	660
56	Sagardighi TPP St-III (WBPDCL)		STATE	U-5	660
Total					**40,345**

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ANNEXURE-IV

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 951 ANSWERED IN THE RAJYA SABHA ON 08.12.2025

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PROJECTS AWARDED BUT DUE FOR CONSTRUCTION AS ON 30.11.2025

Sl. No	Name Of Project	Sector	Developer	State	Capacity in MW	Total capacity in MW
1	Darlipalli-II	Central	NTPC	Odisha	1x800	800
2	Mirjapur TPS	Private	ADANI POWER	Uttar Pradesh	2x800	1,600
3	Kawai	Private	Adani	Rajasthan	4x800	3,200
4	Telangana Stage II	Central	NTPC	Telangana	3x800	2,400
5	Salboni STPP	PRIVATE	JSW	West Bengal	2X800	1,600
6	Pirpanthi TPS	Private	Adani Power	Bihar	3x800	2,400
7	Anuppur TPS Ph II	Private	M B Power	Madhya Pradesh	1x800	800
8	Adani Power Ltd. Anuppur TPP	Private	Adani Power	Madhya Pradesh	1x800	1,600
9	Torent Power	Private	Torent Power	Madhya Pradesh	2x800	1,600
10	Meja-II	Central	NTPC-UP-JV	Uttar Pradesh	3x800	2,400
11	Amarkantak TPS	STATE	MPPGCL	Madhya Pradesh	1x660	660
12	Satpura TPP (Sarni) U#12	STATE	MPPGCL	Madhya Pradesh	1x660	660
13	Assam State thermal Power Station	State	APGCL	Assam	4x800	3,200
Total						**22,920**

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ANNEXURE-V

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 951 ANSWERED IN THE RAJYA SABHA ON 08.12.2025

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THERMAL POWER PROJECTS UNDER BIDDING/PIPELINE AS ON 30.11.2025

Sr.No.	Name Of Project	Sector	Developer	State	Capacity in MW	Total capacity in MW
1	Durgapur TPS Ph-III	Center	DVC	West Bengal	1x800	800
2	Lara TPP Ph-III	Central	NTPC	Chhattisgarh	2x800	1,600
3	IB Valley Extn St-III, (U#5 & 6)	State	OPGC	Odisha	2x660	1,320
4	ChandrapuraExtn TPS	Central	DVC	Jharkhand	2x800	1,600
GRAND TOTAL						**5,320**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.952
ANSWERED ON 08.12.2025

INDIA ENERGY STACK

952 # SHRI BRIJ LAL:

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

(a) the components, design structure and functional levels proposed under the India EnergyStack (IES) envisaged by Government;

(b) whether Government has selected any pilot utility for implementation of the proof-of-concept (PoC) of the India Energy Stack (IES), if so, the names of the selected utilities andthe criteria adopted for their selection;

(c) the proposed timelines and major milestones for nationwide implementation of IndiaEnergy Stack; and

(d) the amount of budget allocated and spent so far for the development, testing andimplementation of the India Energy Stack?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a)to(d): India Energy Stack (IES) is envisioned to create a universal digital blueprint for the power sector as a whole so that the disparate parts of the power system can connect and communicate securely through standard protocols. The Ministry has constituted a task force comprising domain experts and various stakeholders including representatives from Ministries, State utilities, Regulators etc for roadmap of IES including its component and design.

Distribution utilities of Delhi, Gujarat, Andhra Pradesh, Uttar Pradesh and Mumbai have been identified for pilot implementation and timeline for demonstration of the same is FY 2026-27.Fund allocated for the development of IES is Rs 51.3 Cr, of which Rs. 3.88 Cr has been released.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.953
ANSWERED ON 08.12.2025

REVAMPED DISTRIBUTION SECTOR SCHEME

953 # DR. KALPANA SAINI:

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

(a) the details of the total proposed outlay and Government budgetary assistance over aperiod of five years under the Revamped Distribution Sector Scheme (RDSS);

(b) details of the total number of smart meters installed and approved in the country tillJune 2025;

(c) the targeted number of smart meters to be installed by the end of 2025;

(d) whether Government has taken any special measures to reduce gross technical andcommercial losses in the distribution sector; and

(e) if so, the details thereof?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): Under Revamped Distribution Sector Scheme (RDSS) infrastructure works including smart metering works worth Rs2,83,525 Cr with Gross Budgetary Support (GBS) of Rs. 1,21,637 Cr from Government of India have been sanctioned.

(b) & (c): Till date, 20.33 croresmart meters have been sanctioned under RDSS, out of which 3.42croresmart meters have been installed. In total, 4.76 crore smart meters have been installed in the country under various schemes, as on date. The installation of sanctioned smart meters is tobe completed by the end of the scheme period (March' 2028).

(d)& (e): Government of India (GoI) has been supporting the power distribution utilities to improve their Aggregate Technical and Commercial (AT&C) losses through various initiatives. Some of the key initiatives taken are as under:

i. Revamped Distribution Sector Scheme (RDSS) launched with the objective of improving the quality and reliability of power through a financially sustainable and operationally efficient Distribution Sector. The scheme aims at bringing down the AT&C losses to pan-India level of 12-15% and ACS-ARR gap to zero. Under the Scheme, projects worth Rs. 2.83 lakh crore have been sanctioned. These involve distribution infrastructure works worth Rs. 1.53 lakh crore which include replacement of old/frayed conductors, laying Low Tension Aerial Bunched (LT AB) cables, and upgradation/augmentation of Distribution Transformers (DT)/Sub-stations, agriculture feeder segregartion etc. The fund release under the scheme has been linked to performance of distribution utilities against various financial parameters, the prominent among them being AT&C losses and ACS-ARR Gap. Execution of these works would also help improve quality of supply of power. Prepaid smart metering is also one of the critical interventions envisaged under RDSS, which would help in improving AT&C losses.

ii. Additional Borrowing consent of 0.5% of GSDP to State Governments, which is conditional on them undertaking specific reforms in the power sector.

iii. Additional Prudential Norms for sanctioning of loans to State owned power utilities contingent on the performance of power distribution utilities against prescribed conditions.

iv. Rules for implementation of FPPCA and cost reflective tariff so as to ensure that all prudent cost for supply of electricity are passed through.

v. Rules and Standard Operating Procedure issued for proper subsidy accounting and their timely payment.

With collective effort of Centre & States/ UTs and the reform measures undertaken, the AT&C loss of distribution utilities at the national levelhas reduced from 21.91% in FY 21 to 16.16% inFY25.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.954
ANSWERED ON 08.12.2025

REVOCATION OF GRID ACCESS FOR RENEWABLE ENERGY PROJECTS

954 SHRI MOHAMMED NADIMUL HAQUE:

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

(a) the total renewable energy capacity for which CTUIL has revoked grid access since2022, with State-wise details thereof;

(b) the number of cancellations that were done due to developer delays and the number ofcancellation due to transmission-side shortcomings;

(c) the number and status of appeals pending before the Central Electricity RegulatoryCommission (CERC); and

(d) whether these repeated revocations indicate gaps in transmission planning needed tomeet the 2030 non-fossil capacity target?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a)&(b): Since 2022, Central Transmission Utility of India Limited (CTUIL) has revoked connectivity of 24 grantees with a Renewable Energy (RE) capacity of 6343MW. The cancellations are on account of developer delays and not due to transmission side delays. State-wise details of revocation are provided at **Annexure.**

(c): There are sixteen petitions pending before the Central Electricity Regulatory Commission that pertain to cases where the Petitioners (Power Generators) have approached CERC seeking protection from revocation of Connectivity.

(d): The revocation of grid access permissions is not due to shortfall in transmission planning for achieving the 2030 non-fossil capacity target. The Government of India has set a goal of 500 GW of non-fossil fuel-based generation capacity by 2030. Already 259 GW of non-fossil capacity is connected to the grid.

Further, Inter-State Transmission System for evacuation of 172 GW of renewable energy is already under construction, and bids are in process for 19 GW capacity. Simultaneously, the Government of India is working with the States to ensure timely development of respective Intra-State Transmission Systems for evacuation of 152 GW of renewable energy. These efforts, together with the planned transmission systems for integrating hydro, nuclear, and other non-fossil capacities, collectively provide a clear implementation plan for achieving the 500 GW non-fossil capacity target.

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 954 ANSWERED IN THE RAJYA SABHA ON 08.12.2025

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Sl No.	State	Location	Applicants	Connectivity Quantum (MW)	Revoked Quantum (MW)	Reason for revocation
1.	Karnataka	Koppal PS, Koppal-II PS, Gadag PS	6	1500	1500	Failure to comply milestones/ Annulment of Letter of Award/Failure in submission of land Documents
2.	Tamil Nadu	Tuticorin-II PS	1	250	32	Failure in achieving COD*
3.	Maharashtra	Solapur S/s, Kallam PS, Solapur PG	8	1090	1090	Failure in achieving COD/ Failure in submission of Financial Closure
4.	Gujarat	Jam Khambhaliya PS, KPS1, KPS3, Bhuj PS, Bhuj-II PS	6	3243	2871	Failure in submission of land documents/ Failure in submission of Financial Closure/ Failure in achieving COD
5.	Rajasthan	Fatehgarh-II, Fatehgarh-III (Sec-I), Bikaner-II	3	850	850	Failure in achieving COD
	TOTAL		**24**	**6933**	**6343**	

*CoD- Commercial Operation Date

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.955
ANSWERED ON 08.12.2025

PROCUREMENT AND POLICY SUPPORT FOR PELLETS MADE FROM AGRICULTURAL STUBBLE

955 DR. VIKRAMJIT SINGH SAHNEY:

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

(a) whether Government has procured pellets made from agricultural stubble for thermalpower plants;

(b) the procurement details during the last three years, plant-wise;

(c) whether any impact assessment has been conducted regarding environmental andeconomic benefits of using stubble-based pellets;

(d) whether Government proposes subsidy or assistance for industries producing suchpellets; and

(e) if so, the timelines and modalities for implementing such support?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : No, Government of India doesn't procure any pellets made from agricultural stubble for thermal power plants. Biomass pellets from agricultural residue are procured by the respective coal-based Thermal Power Plants (TPPs).

(b) : The plant-wise biomass pellets procured and co-fired in coal based Thermal Power Plants during the last three years i.e. FY 2022-23, FY 2023-24 and FY 2024-25, are given at **Annexure.**

(c) : No such impact assessment has been carried out regarding environmental and economic benefits of using stubble-based pellets. However, Agro-residue (Biomass) are now utilized for power generation through Ministry of Power's policy on biomass co-firing in coal-based thermal power plants. Co-firing of biomass pellets in TPPs reduces the amount of coal required by the power plant. This leads to a reduction of carbon dioxide emissions as biomass is a renewable source of energy. To some extent, it mitigates air pollution cause due to stubble burning. Also, the development of biomass supply chain shall generate source of revenue for the farmers through procurement of raw biomass by pellet manufacturers/aggregators.

As on 31.10.2025, approximately 34.21 Lakh Metric Tonnes (LMT) of biomass pellets have been co-fired across the country, leading to reduction of around 40 LMT of carbon dioxide (CO_2) emissions.

…….2.

(d) & (e) : The Government has taken various steps to promote establishment of biomass pellet manufacturing units across the country. Following financial Subsidy Schemes have been issued by Ministry of New & Renewable Energy (MNRE) and Central Pollution Control Board (CPCB):

(i) **MNRE Biomass Programme**- "*Scheme to Support Promotion of Manufacturing of Briquettes & Pellets and Biomass (Non-Bagasse) Based Cogeneration in Industries in the Country*" to support setting up of Biomass Briquette/Pellet manufacturing plants across the country for the period of FY 2021-22 to 2025-26. The scheme provides financial assistance as:

a. **For Briquette manufacturing plant:**Rs. 09 Lakh per Metric Ton per Hour (MTPH) production capacity (subject to maximum Rs. 45 Lakh per project).

b. **For Non-Torrefied Pellet manufacturing plant:**Rs. 21 Lakhs per MTPH production capacity or 30% of the capital cost, whichever is lower (subject to maximum Rs. 105 Lakhs per project).

c. **For Torrefied Pellet manufacturing plant:**Rs. 42 Lakh per MTPH production capacity or 30% of the capital cost, whichever is lower (subject to maximum Rs. 210 Lakh per project)

(ii) **CPCB** -*" Guidelines for providing one-time financial support for setting up of paddy straw based pelletisation and torrefaction plants"* using only paddy straw generated in the NCT of Delhi, States of Punjab & Haryana, and NCR districts of Rajasthan & Uttar Pradesh, provides financial assistance as:

a. **Pelletisation plant:** Rs. 28 Lakh per Ton per Hour (TPH) production capacity or 40% of the capital cost considered for plant and machinery of a 1 TPH plant, whichever is lower (subject to maximum Rs. 1.4 Crore per proposal)

b. **Torrefaction plant:** Rs. 56 Lakh per TPH production capacity or 40% of the capital cost considered for plant and machinery of a 1 TPH plant, whichever is lower (subject to maximum Rs. 2.8 Crore per proposal).

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 955 ANSWERED IN THE RAJYA SABHA ON 08.12.2025

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Biomass Procured and co-fired in coal based Thermal Power Plants during the last three years

Sr. No.	Organization/ Power Utility	Name of the Plant	State	FY 22-23 (Metric Tonne)	FY 23-24 (Metric Tonne)	FY 24-25 (Metric Tonne)
1	HPGCL	Rajiv Gandhi Thermal Power Station, Khedar, Hissar (RGTPS)	Haryana	0	418	86,074
2	HPGCL	Deen BandhuChhotu Ram Thermal Power Project, Yamuna Nagar TPS (DCRTPP)	Haryana	0	0	35,558
3	HPGCL	Panipat Thermal Power Station, KhukhranaPanipat (PTPS)	Haryana	0	0	61,809
4	Apraava Energy	Mahatma Gandhi TPS, Jhajjar	Haryana	1,956	79,477	2,15,165
5	NTPC JV-APCPL	Indira Gandhi Super Thermal Power Project (IGSTPP), Jhajjar	Haryana	8,476	96,536	2,22,963
6	Vedanta	Talwandi Sabo Power Limited (TSPL), Mansa	Punjab	50	25	26,062
7	L&T	Nabha Power Limited (NPL), Rajpura	Punjab	0	396	1,77,260
8	PSPCL	Guru Gobind Singh Super Thermal Plant Ropar (GGSSTP), Ropar	Punjab	61	3,222	94,935
9	PSPCL	Guru Hargobind Thermal Plant (GHTP), LehraMohabbat	Punjab	39	16,801	60,686
10	UPRVUNL	Harduaganj TPS	Uttar Pradesh	2,645	26,147	43,461
11	NTPC	National Capital Power Station, Dadri	Uttar Pradesh	575	35,750	2,73,829
12	NTPC	Tanda Thermal Power Station, Ambedkar Nagar	Uttar Pradesh	1491	167	28,213
13	NTPC	Feroze Gandhi Unchahar Thermal Power Station, Raebareli	Uttar Pradesh	154	0	0
14	UPRVUNL	Parichha Thermal Power Station, Jhansi	Uttar Pradesh	0	0	210
15	Bajaj Energy Limited	Lalitpur Power Genaration Company Limted, Lalitpur	Uttar Pradesh	0	0	1,350
16	NTPC	Gadarwara Super Thermal Power Station, Narsinghpur	Madhya Pradesh	1,836	6,881	32,731
17	NTPC	Khargone Super Thermal Power Station, Khargone	Madhya Pradesh	4,259	19,379	54,615
18	NTPC	Vindhyachal Thermal Power Station, District Singrauli,	Madhya Pradesh	0	0	852
19	Hindalco Industries Ltd.	Mahan Al. Unit- CPP	Madhya Pradesh	14,771	49,743	25,694
20	Jaiprakash Power ventures	JaypeeNigrie Super Thermal Power Plant,	Madhya Pradesh	400	588	526

21	Jaiprakash Power ventures	JaypeeBina TPS	Madhya Pradesh	339	147	687
22	Reliance Power	Sasan Power Ltd	Madhya Pradesh	44	0	0
23	NTPC	Mauda Super Thermal Power Station,	Maharashtra	2,580	4197	71,129
24	NTPC	Solapur Super Thermal Power Station	Maharashtra	0	0	7502
25	RPSG Group	Dhariwal infrastructure limited	Maharashtra	0	24	101
26	GMR Warora Energy Limited	GMR Warora Energy Limited	Maharashtra	20	0	3241
27	JSW Energy Limited	JSW Energy - Ratnagiri	Maharashtra	5	0	0
28	SaiWardha	SaiWardha Power Generation Private Limited, Warora	Maharashtra	0	10	0
29	Tata Power	Trombay Thermal Power Station	Maharashtra	0	0	499
30	NTPC	LARA Super Thermal Power Station, Raigarh	Chhattisgarh	139	0	23
31	Adani Power	Raipur Energen Limited.	Chhattisgarh	77	0	0
32	NTPC	Sipat Super Thermal Power Station, Bilaspur, Chhattisgarh	Chhattisgarh	3,676	0	5,880
33	DB Power Ltd	Badadarha TPP	Chhattisgarh	25	60	0
34	Adani Power	Raigarh Energy Generation Ltd.	Chhattisgarh	25	0	0
35	Vedanta Ltd	Bharat Aluminium Company Limited	Chhattisgarh	4,755	14,500	2,973
36	NTPC	KorbaKorba Super Thermal Power Station	Chhattisgarh	0	0	449
37	NSPCL-SAIL	NSPCL Bhilai Power Plant	Chhattisgarh	0	250	3513
38	Jindal Power	JINDAL SUPER THERMAL POWER PLANT Tamnar	Chhattisgarh	0	264	0
39	TRN ENERGY	TRN ENERGY PRIVATE LIMITED, NAWAPARA, Raigarh	Chhattisgarh	0	0	25
40	Maruti Clean Coal and Power Limited	BANDAKHAR TPP, BandhaKhar, Tah- Pali, PO- Nunera, Distt-Korba	Chhattisgarh	0	0	24
41	Lanco	Lanco-Amarkantak Power Limited	Chhattisgarh	0	50	0
42	DVC	Raghunathpur TPS	West Bengal	0	21	9012
43	DVC	Mejia Thermal Power Station (MTPS)	West Bengal	0	56	13,405
44	DVC	Durgapur Steel Thermal Power Station (DSTPS)	West Bengal	49	452	10,616
45	RPSG Group	Budge Budge Generating station	West Bengal	111	49	24
46	RPSG Group	Haldia Energy Ltd	West Bengal	0	80	0
47	WBPDCL	Bakreswar Thermal Power Station	West Bengal	22	0	0
48	WBPDCL	Sagardighi TPS	West Bengal	25	0	0
49	NTPC	Simhadri Super Thermal Power Station, Visakhapatnam	Andhra Pradesh	464	0	0

50	Vedanta	Jharsuguda Captive Power	Orissa	44	329	0
51	GMR Kamalganga	GMR Kamalanga Energy Limited	Orissa	20	0	0
52	NLC India Limited	Barsingsar Thermal Power Station, Bikaner	Rajasthan	0	0	424
53	Shree Group	Shree Mega Power Bewar	Rajasthan	0	17,647	0
54	DVC	Bokaro Thermal Power Station - A (BTPS)	Jharkhand	0	0	7,761
55	DVC	Koderma Thermal Power Station (KTPS)	Jharkhand	0	0	18,268
56	Tata Power	Jojobera Power Plant	Jharkhand	0	23	0
57	NTPC	Kahalgaon Super Thermal Power Station, Bhagalpur, Bihar	Bihar	6	0	0
58	GSECL	Bhavnagar Lignite Thermal Power Station	Gujarat	0	0	3,612
59	GSECL	Gandinagar Thermal Power Plant, Gandhinagar	Gujarat	0	45	33,26
60	GSECL	Wanakbori Thermal Power Plant, Kheda	Gujarat	0	20	9,280
61	GSECL	Ukai Thermal Power Plant, Tapi	Gujarat	0	10	3,893
62	JSW Energy Limited	JSW Energy - TPP -Toranagallu	Karnataka	336	0	0
63	IL&FS TPCL	IL&FS Tamilnadu Power Company Limited, Parangipettai, Cuddalore,	Tamil Nadu	0	0	39
64	NLC	NLC Tamilnadu Power Limited, Tuticorin.	Tamil Nadu	0	37	36
65	OPG Power	OPG Power Generation Pvt Ltd.	Tamil Nadu	618	1,055	717
	Total			**50,093**	**3,74,856**	**16,18,452**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.956
ANSWERED ON 08.12.2025

THERMAL POWER AND RENEWABLE GENERATION OBLIGATION (RGO)

956 SHRI KESRIDEVSINH JHALA:
SHRI MITHLESH KUMAR:
SMT. KIRAN CHOUDHRY:

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

(a) the manner in which Government is enforcing the 40 per cent Renewable GenerationObligation (RGO) for new coal/lignite-based plants;

(b) the policies that prevent retiring coal assets from being replaced by high-pollution units,and the manner in which Distribution Companies (DISCOMs) are supported in procuringRenewable Energy;

(c) whether Government is considering to extend Inter-State Transmission System (ISTS)charges waiver to all future thermal and hydro projects bundled with energy storage;

(d) if so, the details thereof; and

(e) whether the Resource Adequacy Planning Framework is being used to optimize DISCOMs' mix of firm power and variable Renewable Energy?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : Pursuant to Clause 6.4(5) of the Tariff Policy 2016, the Ministry of Power initially mandated a Renewable Generation Obligation (RGO) vide a resolution dated 27th February, 2023. This required any generating company establishing a new coal/lignite-based thermal power station with a Commercial Operation Date (COD) on or after April 1, 2023, to either:

- Establish renewable energy capacity equivalent to a minimum of 40% of the thermal station's capacity (in MW), or;
- Procure and supply renewable energy equivalent to such capacity.

……2.

However, considering that generation capacity addition is now predominantly from renewable sources, the RGO was made voluntary in August 2025.

(b) : As per Section 7 of the Electricity Act, 2003 Generation is a delicensed activity. Accordingly, the decision of retiring coal based thermal units is with the Power Generating Companies. However, considering the expected energy demand scenario and availability of capacity in future, CEA vide letters dated 20.01.2023 and 07.07.2023 has issued advisory to all the Thermal Power Utilities not to retire or repurpose their coal-based power stations before 2030.

Further, DISCOMs are encouraged to procure renewable energy though various policy initiatives like Renewable Consumption Obligations, Inter-state transmission charges waiver for storage based electricity, facilitation of rooftop solar installations, financial support for establishing energy storage systems and expansion of transmission network.

(c) & (d): No such proposal is under consideration.

(e): As per the Resource Adequacy Guidelines dated 28th June 2023, each Distribution Licensee is required to prepare Resource Adequacy Plan (RAP) with a 10-year planning horizon, to meet electrical peak demand and energy requirement. The RAP optimizes the mix of firm power and RE sources taking into consideration various factors including cost and availability of various sources of power and the extant policy or guidelines. The DISCOM holds the responsibility for implementing the plan and securing necessary capacity, and the compliance is ensured by the respective State Electricity Regulatory Commission (SERC).

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.957
ANSWERED ON 08.12.2025

SMART MONITORING OF POWER CONSUMPTION

957 SMT. SUMITRA BALMIK:

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

(a) the status of rollout of smart meters in the country, State-wise details;

(b) the mechanism for procurement of smart meters and the percentage of smart meterswhich are indigenous or have indigenous content;

(c) whether Government gives any preference to domestic manufacturers and startups inthis field; and

(d) details of any related initiatives towards smart monitoring of electricity consumption atthe household, substation and grid level?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): Under Revamped Distribution Sector Scheme (RDSS), 20.33 crore smart meters have been sanctioned based on the proposal submitted by the States. In addition, many States have installed smart meters under the State schemes or externally aided projects. Till date 4.76 crore smart meters have been installed in the country under various schemes. State wise details are enclosed at **Annexure**.

(b) & (c): Under RDSS, smart metering is being carried out through Public Private Partnership (PPP) in TOTEX (i.e total expenditure which is sum of capital expenditure and operational expenditure) mode. The Advanced Metering Infrastructure Service Provider (AMISP) is responsible for supplying, maintaining and operating the metering infrastructure post installation.
To promote indigenization in Smart Meters, this Ministry, after deliberations with stakeholders, has taken various steps:

1. In July 2023 smart meters were included in the Annexure I of Public Procurement (Preference to Make in India), Order.

2. Presently, the minimum local content in smart meters is to be 60%.

3. In addition, since the Head End System (HES) and Meter Data Management (MDM) System are vital components of the Advanced Metering Infrastructure, 100% MLC in MDM and HES was mandated w.e.f. 01.01.2025.

……..2.

(d): Several key initiatives have been undertaken for smart monitoring of electricity consumption at all levels. These include:

i. Smart meters provide consumers with real-time data on their energy usage.

ii. The data generated from smart meters at the system level including Feeders and Distribution Transformers and consumer level gives complete insights regarding energy accounting and is being used by the Distribution utilities for conducting energy audits.

iii. The shift to prepaid smart meters allows for better budgeting for consumers and improved cash flow & billing efficiency for utilities.

iv. Monitoring at the substation and grid level involves automation and integration of IT systems to improve reliability and efficiency. SCADA (Supervisory Control and Data Acquisition)/ DMS (Distribution Management System) systems have been sanctioned under RDSS which help in reducing outages and improving response times to faults through remote monitoring and control, thus improving the efficiency and reliability of power distribution networks.

v. Funds have been allocated under the scheme for modernisation works including strengthening and upgrading distribution infrastructure, including substations, transmission lines, and underground cabling.The digitalization and modernization of the grid is essential for integration of renewable energy sources into the Distribution network, thereby facilitating the clean energy transition in the country.

vi. Further, this Ministry is also actively supporting the Technology Solution Providers (TSPs), including startups to develop and scale up solutions that leverage the data from smart meters for various use under RDSS.

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 957 ANSWERED IN THE RAJYA SABHA ON 08.12.2025

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Sl. No.	State	Total Installed Meters as on 15.11.2025
1	Andaman & Nicobar	75,200
2	Andhra Pradesh	20,17,269
3	Arunachal Pradesh	42,267
4	Assam	49,60,048
5	Bihar	82,37,246
6	Chandigarh	24,214
7	Chhattisgarh	30,53,925
8	Delhi	2,60,000
9	Goa	-
10	Gujarat	31,28,262
11	Haryana	8,47,467
12	Himachal Pradesh	7,65,932
13	Jammu and Kashmir	10,15,139
14	Jharkhand	9,71,708
15	Kerala	75,303
16	Ladakh	57,509
17	Madhya Pradesh	31,65,608
18	Maharashtra	73,98,415
19	Manipur	21,866
20	Meghalaya	-
21	Mizoram	18,983
22	Nagaland	27,262
23	Odisha	4,500
24	Puducherry	227
25	Punjab	18,06,108
26	Rajasthan	18,28,078
27	Sikkim	79,635
28	Tamil Nadu	1,35,201
29	Telangana	8,882
30	Tripura	1,17,565
31	Uttar Pradesh	65,06,420
32	Uttarakhand	3,73,530
33	West Bengal	5,79,668
	Total	**4,76,03,437**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.958
ANSWERED ON 08.12.2025

TRANSMISSION NETWORK IN RAJASTHAN

958 # SHRI RAJENDRA GEHLOT:

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

(a) whether Government is strengthening the transmission network in the State of Rajasthan;

(b) the number of sub-centers sanctioned during the last three years; and

(c) the expected improvements in the reliability of power supply?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b): The strengthening of the transmission network in the State of Rajasthan is being undertaken through both Inter-State Transmission System (ISTS) and Intra-State Transmission System (InSTS) projects to cater to rising demand and the evacuation of renewable power. At present, transmission systems for evacuation of about 15.5 GW renewable capacity have already been commissioned in Rajasthan and ISTS projects for an additional 51.5 GW are under implementation.

During the last three years, 15 ISTS sub-stations have been sanctioned in Rajasthan to augment the transmission network.

Further, the Ministry of New and Renewable Energy (MNRE) is implementing the Green Energy Corridor (GEC) Phase-I and Phase-II schemes for creation of transmission infrastructure dedicated to renewable power. Under GEC-I, transmission projects comprising about 1,054 circuit kilometres (ckm) of lines and 1,915 Mega Volt Ampere (MVA) transformation capacity have been commissioned. Under GEC-II, projects covering 659 ckm of lines and 2,191 MVA transformation capacity are at various stages of implementation.

(c): Reliability of transmission infrastructure in Rajasthan is being enhanced through installation of system-strengthening elements such as Bus Reactors, Line Reactors, Static Compensators (STATCOMs) and Synchronous Condensers at appropriate voltage levels.

……2.

Additionally, the Government of India launched the Revamped Distribution Sector Scheme (RDSS) in July 2021 to improve the quality, reliability and affordability of power supply through reforms in the distribution sector. The scheme seeks to reduce Aggregate Technical & Commercial (AT&C) losses to 12-15% and eliminate the revenue gap per unit of energy supplied. Under RDSS, financial assistance has been sanctioned for infrastructure upgradation and smart metering activities.

In Rajasthan, projects amounting to ₹18,693 crore for loss-reduction works and ₹9,715 crore for smart metering works have been sanctioned. These works include upgradation of distribution transformers and substations, replacement of ageing or damaged conductor and cable, and feeder segregation for agricultural consumers, which will collectively contribute to improved reliability of electricity supply in the State.

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