

**GOVERNMENT OF INDIA
MINISTRY OF POWER**

**LOK SABHA
UNSTARRED QUESTION NO.2882
ANSWERED ON 12.12.2024**

INTER-STATE POWER TRANSMISSION

2882. SHRI KARTI P CHIDAMBARAM:

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

- (a) the data on power generation, power utilization and net power export/import, including details of conventional and renewable sources of energy during the last five years and the current year, State-wise;**
- (b) the name of net power exporters/importers States along with the annual figures for power exported/imported;**
- (c) the steps taken/being taken by the Government to help power deficits in meeting the demand through inter-State power trade or enhanced local generation capacity; and**
- (d) the efforts made/being made to improve inter-State power transmission and regional grid integration along with ensuring better distribution and reduced power shortages?**

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b) : State/UT wise details of power generation from the conventional and renewable energy sources during the last five (5) years and current year (upto October, 2024) are given at Annexure-I. State/UT wise details of Energy Requirement and Energy Supplied in the country during the last five (5) years and current year upto October, 2024 are given at Annexure-II.

State/UT wise details of Net power Import/ Export, through Inter-State Transmission network, during the last five (5) years and current year (till October, 2024) are given at Annexure-III.

(c) : Government of India has taken the following steps to meet the Power demand in the country:

(i) In order to augment the power generation capacity, the Government of India has initiated following capacity addition programme:

(a) Ministry of Power, in consultation with States, has envisaged a plan to add thermal capacity of a minimum 80,000 MW by 2031-32. Against this target, 29,200 MW Thermal Capacity is already under construction while 51,520 MW is at various stages of planning & development.

(b) 13,997.5 MW of Hydro Electric Projects and 6,050 MW Pumped Storage Projects (PSP) are under construction. 24,225.5 MW of hydro electric projects and 50,760 MW of PSP are under various stage of planning and targeted to be completed by 2031-32.

(c) 7,300 MW of Nuclear Capacity is under construction and 7,000 MW is under various stages of planning and approval.

(d) Present installed Renewable Energy (RE) capacity of the country is 2,03,215 MW. Further, 1,27,050 MW of RE is under construction and 89,690 MW is under various stages of tendering. India has committed to augment non fossil fuel based installed electricity generation capacity to over 5,00,000 MW by 2030.

(ii) Directions under Section 11 of Electricity Act have been issued to imported coal based plants to operate and generate power to their full capacity.

(iii) Gas based power plants of NTPC as well as gas-based generation procured through NVVN were scheduled during high power demand period.

(iv) Steady supply of coal to all the thermal power plants is being ensured to prevent fuel shortages.

(v) All the GENCOs including IPPs and Central generating stations have been advised to generate and maintain full availability on daily basis excluding the period of planned maintenance or forced outage.

(vi) Hydro based generation is being scheduled in a manner so as to conserve water for meeting demand during peak period.

(vii) Planned maintenance of generating units is being minimized during period of high demand.

(viii) To meet the growing electricity demand, new power generation capacity was monitored closely for timely addition.

(ix) Government has facilitated power trading through regulatory framework whereby states with surplus generation can sell power to states which are in deficit through three (3) power exchanges viz. Indian Energy Exchange (IEX), Power Exchange India Ltd (PXIL) and Hindustan Power Exchange Ltd. These exchanges are being utilized for Inter-state trading of power by the States.

(x) Electricity market has been reformed by adding the Real Time Market (RTM), Green Day Ahead Market (GDAM), Green Term Ahead Market (GTAM), High Price Day Ahead Market (HPDAM) in Power exchange. Also, there is DEEP portal (Discovery of Efficiency Electricity Price) for e-bidding and e-Reverse for procurement of short-Term power by DISCOMs.

(d) : To improve interstate power transmission, a robust national grid has been established to facilitate the transfer of power from power surplus regions to power deficit regions. The inter-regional transmission capacity has been increased from 75.050 GW during 2016-17 to 118.740 GW as on October 2024 which is planned to increase to 143 GW by the year 2027 and further to 168 GW by the year 2032. The capacity of National Grid is being expanded on a continuous basis commensurate with the growth in electricity generation and electricity demand.

As per Electricity Act 2003, distribution of electricity is a licensed activity and it is the duty of the respective distribution licensee to develop and maintain an efficient, co-ordinated and economical distribution system in its area of supply to provide reliable power supply to the consumers. However, Government of India supplements the efforts of the states by launching various schemes from time to time to enable states to improve and augment their Sub-transmission and Distribution Infrastructure for providing 24x7 reliable and quality power to all the consumers.

Distribution system has been strengthened by implementing projects of 1.85 lac crores under DDUGJY (Deen Dayal Upadhyaya Gram Jyoti Yojana)/ IPDS (Integrated Power Development Scheme)/SAUBHAGYA (Pradhan Mantri Sahaj Bijli Har Ghar Yojana). Under the above distribution sector schemes, 2927 new sub-stations have been added, upgradation of 3965 existing sub-stations has been carried out, 6,92,200 Distribution Transformers have been installed, Feeder separation of 1,13,938 ckm has been done and 8.5 Lakh ckm of HT and LT lines have been added/upgraded across the States.

Government of India launched Revamped Distribution Sector Scheme (RDSS) in July 2021, 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 with an estimated Government Budgetary Support (GBS) of Rs. 97,631 Crore. Under RDSS, projects worth Rs. 2.77 lakh crore for distribution infrastructure works and smart metering works have been sanctioned at National level.

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 2882 ANSWERED IN THE LOK SABHA ON 12.12.2024

The details of power generation from the conventional and renewable energy sources from 2019-20, 2020-21 and 2021-22:-

(All figures in MUs)

State	2019-20		2020-21		2021-22	
	Conventional Source	Renewable Source	Conventional Source	Renewable Source	Conventional Source	Renewable Source
Andaman & Nicobar Islands		17	118	40	117	35
Andhra Pradesh	62,943	13,993	52,749	14,134	58,535	15,663
Arunachal Pradesh	1,786	2	3,451	2	4,161	2
Assam	8,030	59	5,969	52	8,277	122
Bihar	35,361	359	33,866	227	43,940	240
Chhattisgarh	1,18,229	1,108	1,35,034	1,634	1,41,275	1,938
Delhi	6,015	424	5,304	427	4,949	459
Goa	0	1	0	1	0	17
Gujarat	1,06,949	17,717	1,03,882	17,977	63,047	24,840
Haryana	17,317	734	14,896	761	22,968	1,135
Himachal Pradesh	40,835	2,167	37,473	2,160	36,460	2,044
Jammu and Kashmir	18,094	443	17,003	439	17,074	416
Jharkhand	26,223	24	27,443	26	28,887	29
Karnataka	45,129	25,648	39,543	27,850	51,934	28,634
Kerala	5,466	805	6,738	1,092	9,317	1,615
Ladakh	270	0	376	0	406	0
Lakshadweep		1		0		0
Madhya Pradesh	1,21,100	8,298	1,29,567	8,518	1,34,321	8,717
Maharashtra	1,31,418	13,986	1,17,572	14,233	1,37,220	15,846
Manipur	367	4	622	8	455	7
Meghalaya	1,018	63	1,152	57	842	45
Mizoram	177	50	159	34	137	28
Nagaland	181	76	204	70	101	63
Odisha	48,254	783	62,066	878	65,392	1,081
Puducherry	256	4	232	6	251	12
Punjab	26,025	2,723	22,742	2,864	27,886	3,242
Rajasthan	55,942	14,349	54,091	16,516	59,898	24,099
Sikkim	11,027	61	10,880	56	11,494	12
Tamil Nadu	83,498	19,764	70,077	21,659	82,020	24,061
Telangana	51,855	6,794	48,406	6,933	57,177	7,346
Tripura	6,093	28	7,043	16	6,332	8
Uttar Pradesh	1,24,180	5,143	1,26,921	5,748	1,36,830	6,329
Uttarakhand	16,541	1,194	14,314	1,237	15,344	872
West Bengal	74,312	1,475	75,947	1,531	86,407	1,845
Dadra and Nagar Haveli and Daman and Diu	-	28	-	52	-	97
Chandigarh	-	13	-	10	-	14
Total	12,44,990	1,38,337	12,25,842	1,47,248	13,13,454	1,70,912
Grand Total (Conventional + Renewable)	13,83,327		13,73,090		14,84,366	

Note: Conventional Sources includes Coal, Diesel, Lignite, Naptha, Natural Gas, Nuclear and Large Hydro (more than 25 MW) and Renewable sources includes Solar, Wind, Biomass, Bagasse and Small Hydro.

The details of power generation from the conventional and renewable energy sources from 2022-23, 2023-24 and current year (upto October, 2024)

(All figures in MUs)

State	2022-23		2023-24		2024-25 (Upto Oct 2024)	
	Conventional Source	Renewable Source	Conventional Source	Renewable Source	Conventional Source	Renewable Source
Andaman & Nicobar Islands	215	38	336	39	216	23
Andhra Pradesh	65,290	16,412	72,617	17,464	44,219	10,406
Arunachal Pradesh	4,821	25	4,278	3	3,219	1
Assam	8,875	279	9,048	381	5,718	333
Bihar	55,200	289	58,362	342	35,958	204
Chhattisgarh	1,42,837	2,003	1,62,710	2,477	95,482	1,808
Delhi	3,784	530	3,755	729	3,213	449
Goa	0	20	0	68	0	38
Gujarat	65,255	29,763	96,916	38,483	69,648	26,651
Haryana	32,139	1,420	28,197	1,652	19,505	1,264
Himachal Pradesh	38,667	2,913	36,366	2,587	32,559	2,612
Jammu and Kashmir	16,777	393	15,874	409	12,680	325
Jharkhand	30,778	22	35,962	23	23,546	11
Karnataka	55,615	29,574	60,942	30,527	36,499	20,327
Kerala	7,989	1,946	5,156	2,204	4,591	1,683
Ladakh	403	0	388	0	337	0
Lakshadweep	15	0	65	0	39	0
Madhya Pradesh	1,43,148	8,873	1,55,125	9,655	88,775	6,992
Maharashtra	1,41,787	17,207	1,50,273	18,765	88,418	11,123
Manipur	478	9	298	9	426	5
Meghalaya	980	72	809	67	753	92
Mizoram	204	62	119	99	195	49
Nagaland	177	112	165	81	189	66
Odisha	70,337	1,192	72,182	1,262	42,934	809
Puducherry	233	12	224	12	123	7
Punjab	35,906	4,170	37,139	4,122	24,397	1,883
Rajasthan	64,973	40,990	69,696	47,149	42,551	33,287
Sikkim	11,697	12	8,610	12	1,641	7
Tamil Nadu	89,062	27,626	93,708	29,603	57,825	23,199
Telangana	56,748	7,430	58,157	7,509	36,860	4,284
Tripura	7,079	7	6,353	7	2,962	3
Uttar Pradesh	1,56,230	7,217	1,57,850	7,202	1,02,437	3,329
Uttarakhand	15,436	932	14,529	931	12,016	545
West Bengal	91,036	1,959	92,330	1,920	56,474	1,123
Dadra and Nagar Haveli and Daman and Diu	-	31	-	29	-	16
Chandigarh	-	13	-	12	-	6
Total	14,14,171	2,03,553	15,08,540	2,25,835	9,46,409	1,52,961
Grand Total (Conventional + Renewable)	16,17,724		17,34,375		10,99,370	

Note: Conventional Sources includes Coal, Diesel, Lignite, Naptha, Natural Gas, Nuclear and Large Hydro (more than 25 MW) and Renewable sources includes Solar, Wind, Biomass, Bagasse and Small Hydro.

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 2882 ANSWERED IN THE LOK SABHA ON 12.12.2024

The details of State / UT wise Energy Requirement and Energy Supplied in the country from FY 2019-20 and FY 2020-21:-

State/UT	April, 2019 -March, 2020				April, 2020 - March, 2021			
	Energy Requirement	Energy Supplied	Energy not Supplied	not	Energy Requirement	Energy Supplied	Energy not Supplied	not
	(MU)	(MU)	(MU)	(%)	(MU)	(MU)	(MU)	(%)
Chandigarh	1,732	1,732	0	0	1,523	1,523	0	0
Delhi	33,086	33,077	9	0	29,560	29,555	4	0
Haryana	54,505	54,492	13	0	53,161	53,108	53	0.1
Himachal Pradesh	10,424	10,353	71	0.7	10,186	10,130	56	0.5
Jammu & Kashmir	20,025	16,259	3,767	18.8	19,773	17,222	2,551	12.9
Punjab	56,776	56,770	6	0	58,445	58,377	67	0.1
Rajasthan	81,281	81,222	58	0.1	85,311	85,205	106	0.1
Uttar Pradesh	1,22,549	1,21,004	1,545	1.3	1,24,367	1,23,383	984	0.8
Uttarakhand	14,472	14,376	96	0.7	13,827	13,818	8	0.1
Chhattisgarh	30,111	30,107	4	0	30,472	30,449	22	0.1
Gujarat	1,13,940	1,13,939	1	0	1,11,622	1,11,622	0	0
Madhya Pradesh	76,172	76,172	0	0	83,437	83,437	0	0
Maharashtra	1,55,167	1,55,166	0	0	1,50,679	1,50,663	16	0
Daman & Diu	2,574	2,574	0	0	2,223	2,223	0	0
Dadra & Nagar Haveli	6,528	6,528	0	0	5,497	5,497	0	0
Goa	4,350	4,350	0	0	4,083	4,083	0	0
Andhra Pradesh	65,452	65,414	38	0.1	62,080	62,076	4	0
Telangana	68,306	68,303	3	0	66,998	66,994	4	0
Karnataka	72,799	72,796	3	0	68,851	68,831	19	0
Kerala	26,315	26,265	50	0.2	25,118	25,102	16	0.1
Tamil Nadu	1,08,816	1,08,812	4	0	1,01,194	1,01,189	5	0
Puducherry	2,847	2,846	1	0	2,644	2,644	0	0
Lakshadweep	46	46	0	0	56	56	0	0
Bihar	31,627	31,533	94	0.3	34,171	34,018	153	0.4
DVC	22,429	22,427	2	0	21,368	21,368	0	0
Jharkhand	8,941	8,872	69	0.8	9,953	9,675	278	2.8
Odisha	29,692	29,692	0	0	29,848	29,848	0	0
West Bengal	52,948	52,824	124	0.2	51,644	51,543	100	0.2
Sikkim	554	554	0	0	546	546	0	0
Andaman-Nicobar	346	323	23	6.7	346	323	23	6.7
Arunachal Pradesh	753	749	4	0.5	719	714	5	0.7
Assam	9,804	9,288	516	5.3	10,192	9,815	377	3.7
Manipur	924	917	6	0.7	974	969	5	0.5
Meghalaya	2,112	2,064	48	2.3	2,031	2,005	26	1.3
Mizoram	647	643	4	0.7	728	723	4	0.6
Nagaland	814	809	5	0.7	826	822	4	0.5
Tripura	1,538	1,515	23	1.5	1,484	1,481	3	0.2
All India	12,91,010	12,84,444	6,566	0.5	12,75,534	12,70,663	4,871	0.4

The details of State / UT wise Energy Requirement and Energy Supplied in the country from FY 2021-22 and FY 2022-23:-

	April, 2021 - March, 2022				April, 2022 - March, 2023			
	Energy Requirement	Energy Supplied	Energy not Supplied		Energy Requirement	Energy Supplied	Energy not Supplied	
State/UT	(MU)	(MU)	(MU)	(%)	(MU)	(MU)	(MU)	(%)
Chandigarh	1,606	1,606	0	0	1,788	1,788	0	0
Delhi	31,128	31,122	6	0	35,143	35,133	10	0
Haryana	55,499	55,209	290	0.5	61,451	60,945	506	0.8
Himachal Pradesh	12,115	12,088	27	0.2	12,649	12,542	107	0.8
Jammu & Kashmir	19,957	18,434	1,524	7.6	19,639	19,322	317	1.6
Punjab	62,846	62,411	436	0.7	69,522	69,220	302	0.4
Rajasthan	89,814	89,310	504	0.6	1,01,801	1,00,057	1,745	1.7
Uttar Pradesh	1,29,448	1,28,310	1,138	0.9	1,44,251	1,43,050	1,201	0.8
Uttarakhand	15,521	15,426	94	0.6	15,647	15,386	261	1.7
Chhattisgarh	31,908	31,872	35	0.1	37,446	37,374	72	0.2
Gujarat	1,23,953	1,23,666	287	0.2	1,39,043	1,38,999	44	0
Madhya Pradesh	86,501	86,455	46	0.1	92,683	92,325	358	0.4
Maharashtra	1,72,823	1,72,809	14	0	1,87,309	1,87,197	111	0.1
Dadra & Nagar Haveli and Daman & Diu	9,433	9,433	0	0	10,018	10,018	0	0
Goa	4,448	4,448	0	0	4,669	4,669	0	0
Andhra Pradesh	68,413	68,219	194	0.3	72,302	71,893	410	0.6
Telangana	70,539	70,523	16	0	77,832	77,799	34	0
Karnataka	72,437	72,417	20	0	75,688	75,663	26	0
Kerala	26,579	26,570	9	0	27,747	27,726	21	0.1
Tamil Nadu	1,09,816	1,09,798	18	0	1,14,798	1,14,722	77	0.1
Puducherry	2,894	2,893	1	0	3,051	3,050	1	0
Lakshadweep	56	56	0	0	64	64	0	0
Bihar	36,216	35,761	455	1.3	39,545	38,762	783	2
DVC	23,741	23,736	4	0	26,339	26,330	9	0
Jharkhand	11,148	10,590	558	5	13,278	12,288	990	7.5
Odisha	38,339	38,332	7	0	42,631	42,584	47	0.1
West Bengal	54,001	53,945	57	0.1	60,348	60,274	74	0.1
Sikkim	610	609	0	0	587	587	0	0
Andaman-Nicobar	335	327	8	2.29199	348	348	0	0.1
Arunachal Pradesh	875	874	1	0.1	915	892	24	2.6
Assam	10,844	10,825	19	0.2	11,465	11,465	0	0
Manipur	1,019	1,018	1	0.1	1,014	1,014	0	0
Meghalaya	2,256	2,243	13	0.6	2,237	2,237	0	0
Mizoram	656	644	12	1.8	645	645	0	0
Nagaland	852	851	1	0.1	926	873	54	5.8
Tripura	1,578	1,578	0	0	1,547	1,547	0	0
All India	13,79,812	13,74,024	5,787	0.4	15,13,497	15,05,914	7,583	0.5

The details of State / UT wise Energy Requirement and Energy Supplied in the country from FY 2023-24 and current year (upto October, 2024)

State / UT	April, 2023 - March, 2024				April, 2024 - October, 2024			
	Energy Requirement	Energy Supplied	Energy not Supplied		Energy Requirement	Energy Supplied	Energy not Supplied	
	(MU)	(MU)	(MU)	(%)	(MU)	(MU)	(MU)	(%)
Chandigarh	1,789	1,789	0	0	1,360	1,360	0	0
Delhi	35,501	35,496	5	0	26,704	26,693	11	0
Haryana	63,983	63,636	348	0.5	47,519	47,490	29	0.1
Himachal Pradesh	12,805	12,767	38	0.3	7,989	7,964	25	0.3
UT of J&K and Ladakh	20,040	19,763	277	1.4	11,097	11,042	55	0.5
Punjab	69,533	69,528	5	0	54,610	54,610	0	0
Rajasthan	1,07,422	1,06,806	616	0.6	65,163	64,860	304	0.5
Uttar Pradesh	1,48,791	1,48,287	504	0.3	1,11,484	1,11,188	296	0.3
Uttarakhand	15,644	15,532	112	0.7	10,520	10,479	41	0.4
Chhattisgarh	39,930	39,872	58	0.1	25,656	25,640	17	0.1
Gujarat	1,45,768	1,45,740	28	0	89,842	89,842	0	0
Madhya Pradesh	99,301	99,150	151	0.2	55,921	55,841	80	0.1
Maharashtra	2,07,108	2,06,931	176	0.1	1,14,835	1,14,777	58	0.1
Dadra & Nagar Haveli and Daman & Diu	10,164	10,164	0	0	6,351	6,351	0	0
Goa	5,111	5,111	0	0	3,157	3,157	0	0
Andhra Pradesh	80,209	80,151	57	0.1	46,477	46,475	1	0
Telangana	84,623	84,613	9	0	48,387	48,385	2	0
Karnataka	94,088	93,934	154	0.2	50,019	50,018	2	0
Kerala	30,943	30,938	5	0	18,414	18,407	8	0
Tamil Nadu	1,26,163	1,26,151	12	0	79,602	79,600	2	0
Puducherry	3,456	3,455	1	0	2,206	2,205	0	0
Lakshadweep	64	64	0	0	39	39	0	0
Bihar	41,514	40,918	596	1.4	29,804	29,656	148	0.5
DVC	26,560	26,552	8	0	15,539	15,536	3	0
Jharkhand	14,408	13,858	550	3.8	9,355	9,286	69	0.7
Odisha	41,358	41,333	25	0.1	27,015	26,991	24	0.1
West Bengal	67,576	67,490	86	0.1	46,772	46,687	84	0.2
Sikkim	544	543	0	0	297	297	0	0
Andaman-Nicobar	386	374	12	3.2	248	240	8	3.4
Arunachal Pradesh	1,014	1,014	0	0	601	601	0	0
Assam	12,445	12,341	104	0.8	8,538	8,533	6	0.1
Manipur	1,023	1,008	15	1.5	580	579	0	0.1
Meghalaya	2,236	2,066	170	7.6	1,128	1,128	0	0
Mizoram	684	684	0	0	391	391	0	0
Nagaland	921	921	0	0	570	570	0	0
Tripura	1,691	1,691	0	0	1,235	1,235	0	0
All India	16,26,132	16,22,020	4,112	0.3	10,26,642	10,25,379	1,263	0.1

**ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION
NO. 2882 ANSWERED IN THE LOK SABHA ON 12.12.2024**

**Details of all India Net Inter State Power Transmission from FY 2020-21 to FY 2024-25 (till
September, 2024)**

All figures in MUs

State/ ISTS connected consumer	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25 (till Oct)
Punjab	29869	34688	34296	33606	33147	30496
Haryana	41013	41967	39422	37507	44276	33862
Rajasthan	23192	28915	25613	30456	33159	20888
Delhi	26941	24119	25894	30948	31103	23316
UP	53920	51811	50138	53411	57574	50223
Uttarakhand	6365	7301	7705	9467	9629	5772
HP	3908	3901	3968	4472	5712	1511
J&K(UT) and Ladakh(UT)	10992	12156	13370	14278	14639	6687
Chandigarh	1639	1513	1609	1789	1789	1365
Chhattisgarh	11624	11590	14661	18928	18234	14144
Gujarat	31547	32735	62685	75476	62321	33672
MP	38610	47491	50785	48727	53679	28819
Maharashtra	48600	53366	54917	62516	71294	39349
Goa	3966	3343	4179	4566	4890	3066
DD&DNH	9072	7692	9427	9955	10472	6354
Andhra Pradesh	20119	26022	27985	24914	29112	12347
Telangana	28505	30227	25946	29931	41075	23614
Karnataka	19682	23856	19101	23124	36456	14275
Kerala	20179	17585	16139	18261	24382	12784
Tamil Nadu	55289	56679	60386	60825	66250	40026
Puducherry	2803	2616	2887	3045	3252	2087
Bihar	30390	32145	33009	34971	37748	27545
Jharkhand	5853	6612	7661	7821	9266	6682
Odisha	7794	3371	14062	16090	13806	9267
West Bengal	17729	12919	8888	12056	18655	16906
Sikkim	464	488	529	576	529	282
Arunachal Pradesh	762	723	791	799	940	532
Assam	8009	8367	8803	9081	9976	7014
Manipur	913	958	1013	1007	992	594
Meghalaya	994	793	1347	1199	1185	277
Mizoram	501	488	489	450	501	176
Nagaland	731	750	805	769	847	536
Tripura	1167	1435	1257	1390	1695	1161

Note: Import(+ve)/Export(-ve)
