

Power Sector at a Glance "ALL INDIA"

Source: OM SECTION

1. Total Installed Capacity (As on 29.02.2024)- Source : Central Electricity Authority (CEA)

➤ Installed Generation Capacity (Sectorwise) as on 29.02.2024 :

Sector	Installed Generation Capacity (MW)	% Share in Total
Central Sector	1,03,753	23.9%
State Sector	1,07,661	24.8%
Private Sector	2,22,781	51.3%
Total Installed Capacity	4,34,195	



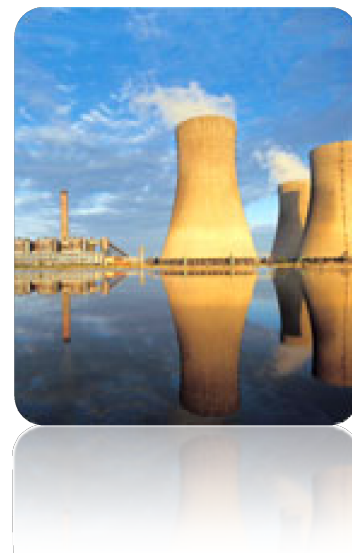
➤ Installed Generation Capacity (Fuelwise) as on 29.02.2024 :

Category	Installed Generation Capacity (MW)	% Share in Total
Fossil Fuel	Coal	2,10,969
	Lignite	6,620
	Gas	25,038
	Diesel	589
	Total Fossil Fuel :	2,43,217
Non-Fossil Fuel	RES (Incl. Hydro)	1,83,498
	Hydro	46,928
	Wind, Solar & Other RE	1,36,570
	Wind	45,154
	Solar	75,576
	BM Power/Cogen.	10,262
	Waste to Energy	584
	Small Hydro Power	4,995
	Nuclear	7,480
	Total Non-Fossil Fuel :	1,90,978
Total Installed Capacity (Fossil Fuel & Non-Fossil Fuel)		4,34,195
		100%

Overview

The Overall generation (Including generation from grid connected renewable sources) in the country has been increased from 1110.458 BU during 2014-15 to 1173.603 BU during the year 2015-16, 1241.689 BU during 2016-17, 1308.146 BU during 2017-18, 1376.095 BU during 2018-19, 1389.121 BU during 2019-20, 1381.855 BU during 2020-21, 1491.859 BU during 2021-22 and 1624.465 BU during 2022-23. The performance of Category wise generation during the year 2022-23 was as follows:-

Thermal	Increased by	8.21%
Nuclear	Reduced by	2.66%
Hydro	Increased by	6.91%
Bhutan Import	Reduced by	10.02%
Solar, Wind & Other RES	Increased by	19.10%
Overall Generation	Increased by	8.89%



The annual growth in generation during recent years is as under:

Year	Growth in Fossil Fuel (Thermal) Generation (%)	Growth in Renewable Energy (RE) Generation (Including Large Hydro) (%)	Growth in Non-Fossil Fuel (RE + Nuclear) Generation (%)	Growth in Total Generation (%)
2011-12	6.6%	17.5%	18.30%	9.14%
2012-13	7.3%	-5.9%	-4.78%	4.46%
2013-14	4.2%	10.0%	9.05%	5.23%
2014-15	10.8%	1.3%	1.91%	8.84%
2015-16	7.5%	-1.8%	-0.97%	5.69%
2016-17	5.3%	8.9%	7.68%	5.80%
2017-18	4.3%	11.1%	9.55%	5.35%
2018-19	3.4%	14.3%	12.09%	5.19%
2019-20	-2.7%	12.7%	13.99%	0.95%
2020-21	-1.0%	2.1%	0.86%	-0.52%
2021-22	7.96%	7.74%	7.96%	7.96%
2022-23	8.21%	12.84%	10.90%	8.89%
2023-24 *	9.96%	-2.96%	-2.12%	6.80%

* Provisional (Upto February, 2024)

Policy Initiatives / Decision Taken

Electricity Act 2003 has been enacted and came into force from 15.06.2003. The objective is to introduce competition, protect consumer's interests and provide power for all. The Act provides for National Electricity Policy, Rural Electrification, Open access in transmission, phased open access in distribution, mandatory SERCs, license free generation and distribution, power trading, mandatory metering and stringent penalties for theft of electricity.

It is a comprehensive legislation replacing Electricity Act 1910, Electricity Supply Act 1948 and Electricity Regulatory Commission Act 1998. The Electricity Act, 2003 has been amended on two occasions by the Electricity (Amendment) Act, 2003 and the Electricity (Amendment) Act, 2007. The aim is to push the sector onto a trajectory of sound commercial growth and to enable the States and the Centre to move in harmony and coordination.

Performance of Generation from all Sources

1.0 Performance of Electricity Generation (Including RE)

1.1 The electricity generation target (Including RE) for the year 2023-24 has been fixed as 1750 Billion Unit (BU). i.e. growth of around 7.2% over actual generation of 1624.158 BU for the previous year (2022-23). The generation during 2022-23 was 1624.158 BU as compared to 1491.859 BU generated during 2021-22, representing a growth of about 8.87%.

1.2 Total Generation and growth over previous year in the country during 2009-10 to 2023-24 :-

Year	Total Generation (Including Renewable Sources) (BU)	% Growth
2009-10	808.498	7.56
2010-11	850.387	5.59
2011-12	928.113	9.14
2012-13	969.506	4.46
2013-14	1,020.200	5.23
2014-15	1,110.392	8.84
2015-16	1,173.603	5.69
2016-17	1,241.689	5.80
2017-18	1,308.146	5.35
2018-19	1,376.095	5.19
2019-20	1,389.102	0.95
2020-21	1,381.855	-0.52
2021-22	1,491.859	7.96
2022-23	1,624.465	8.89
2023-24 *	1,588.220	6.80

* Upto February, 2024 (Provisional), Source : CEA

1.3 The electricity generation target for the year 2023-24 was fixed at 1750 BU comprising of 1324.110 BU Thermal; 156.700 BU Hydro; 46.190 Nuclear; 8 BU Import from Bhutan and 215 BU RES (Excl. Large Hydro).

2.0 Plant Load Factor (PLF):

2.1 The PLF in the country (Coal & Lignite based) from 2009-10 to 2023-24 is as under:

Year	All India PLF (%)	Sector-wise PLF (%)		
		Central	State	Private
2009-10	77.5	85.5	70.9	83.9
2010-11	75.1	85.1	66.7	80.7
2011-12	73.3	82.1	68.0	69.5
2012-13	69.9	79.2	65.6	64.1
2013-14	65.60	76.10	59.10	62.10
2014-15	64.46	73.96	59.83	60.58
2015-16	62.29	72.52	55.41	60.49
2016-17	59.88	71.98	54.35	55.73
2017-18	60.72	72.38	56.90	55.34
2018-19	61.07	72.64	57.81	55.24
2019-20	55.99	64.21	50.24	54.64
2020-21	54.51	63.40	46.23	54.66
2021-22	58.87	69.71	54.50	53.62
2022-23	64.15	74.67	61.86	56.64
2023-24 *	68.76	74.73	64.51	67.21

* Upto February, 2024 (Provisional), Source : CEA

3.0 Power Supply Position

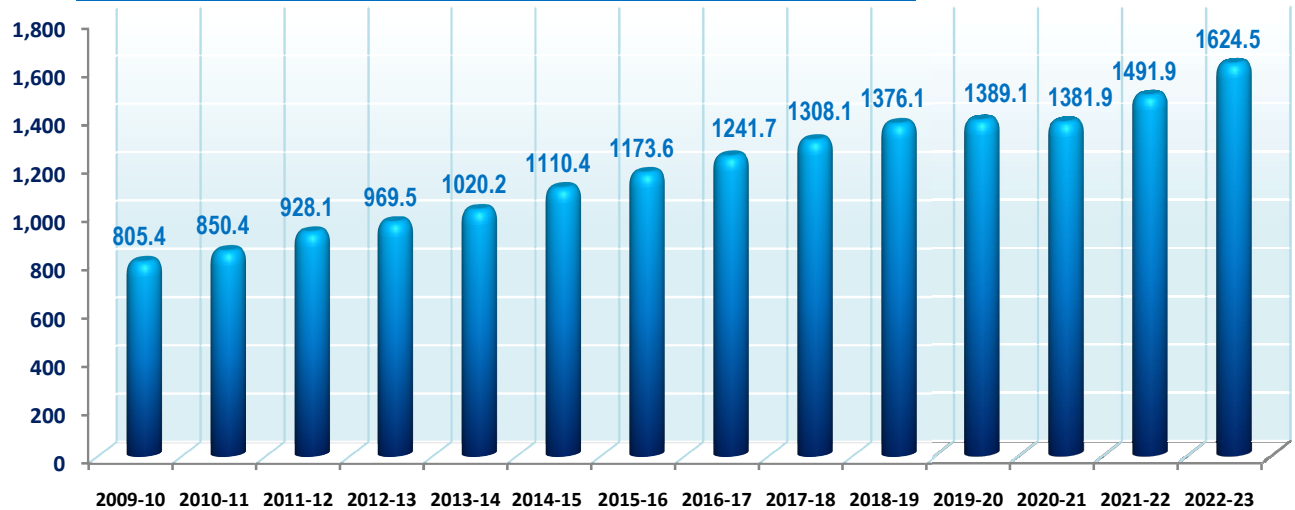
The power supply position in the country during 2009-10 to 2023-24 :

Year	Energy				Peak			
	Requirement	Availability	Surplus (+) / Deficits (-)		Peak Demand	Maximum Demand Met	Surplus (+) / Deficits (-)	
	(MU)	(MU)	(MU)	(%)	(MW)	(MW)	(MW)	(%)
2009-10	8,30,594	7,46,644	-83,950	-10.1	1,19,166	1,04,009	-15,157	-12.7
2010-11	8,61,591	7,88,355	-73,236	-8.5	1,22,287	1,10,256	-12,031	-9.8
2011-12	9,37,199	8,57,886	-79,313	-8.5	1,30,006	1,16,191	-13,815	-10.6
2012-13	9,95,557	9,08,652	-86,905	-8.7	1,35,453	1,23,294	-12,159	-9.0
2013-14	10,02,257	9,59,829	-42,428	-4.2	1,35,918	1,29,815	-6,103	-4.5
2014-15	10,68,923	10,30,785	-38,138	-3.6	1,48,166	1,41,160	-7,006	-4.7
2015-16	11,14,408	10,90,850	-23,558	-2.1	1,53,366	1,48,463	-4,903	-3.2
2016-17	11,42,929	11,35,334	-7,595	-0.7	1,59,542	1,56,934	-2,608	-1.6
2017-18	12,13,326	12,04,697	-8,629	-0.7	1,64,066	1,60,752	-3,314	-2.0
2018-19	12,74,595	12,67,526	-7,070	-0.6	1,77,022	1,75,528	-1,494	-0.8
2019-20	12,91,010	12,84,444	-6,566	-0.5	1,83,804	1,82,533	-1,271	-0.7
2020-21	12,75,534	12,70,663	-4,871	-0.4	1,90,198	1,89,395	-802	-0.4
2021-22	13,79,812	13,74,024	-5,787	-0.4	2,03,014	2,00,539	-2,475	-1.2
2022-23	15,11,847	15,04,264	-7,583	-0.5	2,15,888	2,07,231	-8,657	-4.0
2023-24 *	14,87,257	14,83,241	-4,016	-0.3	2,43,271	2,39,931	-3,340	-1.4

* Upto February, 2024 (Provisional), Source : CEA

Total Generation (Including Renewable Sources)

(In Billion Units)



Growth in Total Generation (%)

