- Share of renewable energy in Maharashtra's total electricity installed capacity has grown significantly from 27.86% to 43.35% over the past 7 years. Within this installed capacity, solar power leads with a share of 47.71% followed by wind power having 23.59% share.

- In 2024-25, Maharashtra was in sixth position in the country in electricity generation from renewable energy sources, producing 25.23 Billion Units (BU), which contributed 6.25% to the country's total electricity generation from RE sources. For electricity generation from solar, wind, bio power and small hydro power, Maharashtra ranked fifth, with 19.59 BU, accounting for 7.68% of India's total from these sources.

- During 2024-25, electricity generation from renewable energy sources contributed 14.82% to Maharashtra's total power generation. Within this, solar energy was the largest contributor with a share of 30.62%, closely followed by wind energy having 30.36% share.

INTERNATIONAL STATUS

Installed capacity:

- As on 31st December 2024, global installed capacity of renewable energy reached a total of 4442.76 GW as per Renewable Energy Statistics-2025 published by International Renewable Energy agency (IRENA). The share of renewable energy in worldwide installed capacity has risen from 29.50% of 2014 to 46.20% by 2024.

- In 2024, global renewable energy sector reached a significant milestone. The year witnessed a record-breaking installation of 581.86 GW of renewable energy installed capacity, against 55.66 GW installations from non-renewable sources.

- Among renewable energy sources, solar energy experienced the most substantial growth, rising from 225.72 GW of 2015 to 1866.31 GW by 2024, while wind energy increased from 416.39 GW to 1132.66 GW during the period.

- Installed capacity under Renewable energy sector has consistently achieved annual growth rates exceeding 7.78%, while growth of installed capacity under non-renewable sector has remained below 3 % since 2016.

- During the past five years, around 80% of annual installed capacity additions have been driven by the renewable energy sector.

- Asia had the largest expansion of 1651.77 GW in installed capacity under Renewable energy sources during 2016 to 2024 followed by Europe with an expansion of 386.24 GW.

- China leads the global renewable energy sector with an installed capacity of 1817.96 GW followed by United States with 427.89 GW, as on 31st December, 2024. Brazil ranked third with 213.86 GW while India secured fourth position with 204.48 GW of RE installed capacity. Germany was in 5th position with an installation of 178.65 GW. Together, top 5 countries accounted for around 64 % of the world's total installed capacity under Renewable energy sector.

- Among the top 5 countries in the Renewable Energy installed capacity, China, USA, India and Germany had their largest share of capacity installations from solar power in their respective country as on December 2024. In the case of wind power capacity installations among these countries Germany held the largest share of 40.76% in the country and Hydro Power installation was dominated in Brazil's RE sector with a contribution of 51.43% of its capacity installations.

Electricity Generation from Renewable Energy sources:

- During 2023, total electricity generation from renewable energy sources reached 8928.49 TWh, a significant increase from 5516.41 TWh of 2015 with an increase in share from 22.7% of 2015 to around 30 %.

- Asia expanded its energy generation from Renewable Energy sector from 2033.20 TWh of 2015 to 4007.63 TWh during 2023, followed by Europe with an expansion from 1174.08 TWh to 1626.36 TWh.

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ALL INDIA STATUS

INSTALLED CAPACITY

CHAPTER 1

Installed Capacity - RE and Non-RE sector

1.1 Installed Capacity in RE and Non-RE sector: As on 31st March, 2025, India's cumulative installed power generation capacity reached 475.21 GW, marking a substantial increase of 72.18% from 275.99 GW of 2014–15. The most notable progress has been in the renewable energy sector which witnessed a remarkable capacity growth of 170.69% during this period. Even more striking is the rise in installations from solar, wind, bio power, and small hydro power sources, which collectively grew by app roximately 331.49% during the same period. Annual installed capacity additions under Renewable energy sector peaked in 2024–25 with a record of 29.5d3 GW, significantly outpacing 3.72 GW added by non-renewable sector. Since 2017–18, annual growth rate of installed capacity under renewable energy sector has consistently exceeded 6%, reaching 15.50% in 2024–25. By the end of 2024–25, renewable energy accounted for 46.32% of India's total installed capacity, with non-fossil sources collectively contributing 48.04%. As detailed data in subsequent chapters will further illustrate, the decade has been defined not just by quantitative expansion, but by a qualitative transformation towards a cleaner, greener, and more inclusive energy future.

Table 1.1 Cumulative Installed Capacity since 2014-15 **(in GW)**

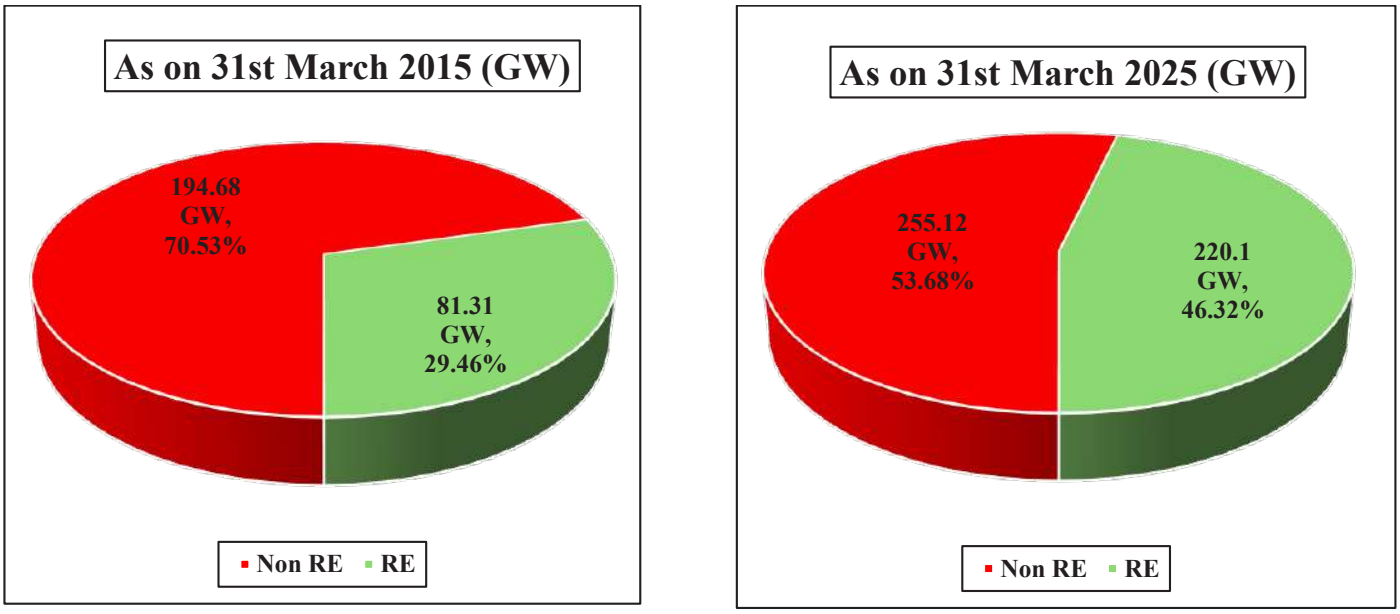
Year	Mode-wise Breakup (GW)						Grand Total	Growth(%)			Share(%)	
	Non-RE			Renewables (RE)								
	Thermal	Nuclear	Total	Large Hydro	RES*	Total		RES	RE	Total	RES	RE
2014-15	188.9	5.78	194.68	41.27	40.04	81.31	275.99	..	..	..	14.51	29.46
2015-16	210.68	5.78	216.46	42.78	47.09	89.87	306.33	17.61	10.53	10.99	15.37	29.34
2016-17	218.33	6.78	225.11	44.48	58.56	103.04	328.15	24.36	14.65	7.12	17.85	31.40
2017-18	222.91	6.78	229.69	45.29	70.65	115.94	345.63	20.65	12.52	5.33	20.44	33.54
2018-19	226.28	6.78	233.06	45.40	79.41	124.81	357.87	12.40	7.65	3.54	22.19	34.88
2019-20	230.6	6.78	237.38	45.70	88.26	133.96	371.34	11.14	7.33	3.76	23.77	36.07
2020-21	234.73	6.78	241.51	46.21	95.80	142.01	383.52	8.54	6.01	3.28	24.98	37.03
2021-22	236.11	6.78	242.89	46.72	109.89	156.61	399.5	14.71	10.28	4.17	27.51	39.20
2022-23	237.27	6.78	244.05	46.85	125.16	172.01	416.06	13.90	9.83	4.15	30.08	41.34
2023-24	243.22	8.18	251.4	46.93	143.64	190.57	441.97	14.77	10.79	6.23	32.50	43.12
2024-25	246.94	8.18	255.12	47.73	172.37	220.10	475.21	20.00	15.50	7.52	36.27	46.32
Gr (2014-15 to 2024-25)	**30.73%**	**41.52%**	**31.05%**	**15.65%**	**331.49%**	**170.69%**	**72.18%**					
CAGR (2014-15 to 2024-25)	**2.72%**	**3.53%**	**2.74**	**1.46%**	**15.72%**	**10.47%**	**5.58%**					

Source: Ministry of New and Renewable Energy(MNRE) and Central Electricity Authority (CEA)

RES*- Comprising of Solar, Wind, Bio-Power and Small Hydro Power

Gr=Growth (%)CAGR=Compound Annual Growth Rate

Fig 1.1 Share of Renewable Energy



Over the last decade, Renewable Energy (RE) sector has made a remarkable contribution to India's power generation landscape, significantly enhancing its share in the total installed capacity. In 2014–15, renewable energy accounted for just 29.46% of the country's total installed power capacity. By 2024–25, this share had surged to an impressive share of 46.32%, underscoring the sector's central role in driving India's clean energy transition.

Fig 1.2 Trend in Cumulative Installed Capacity