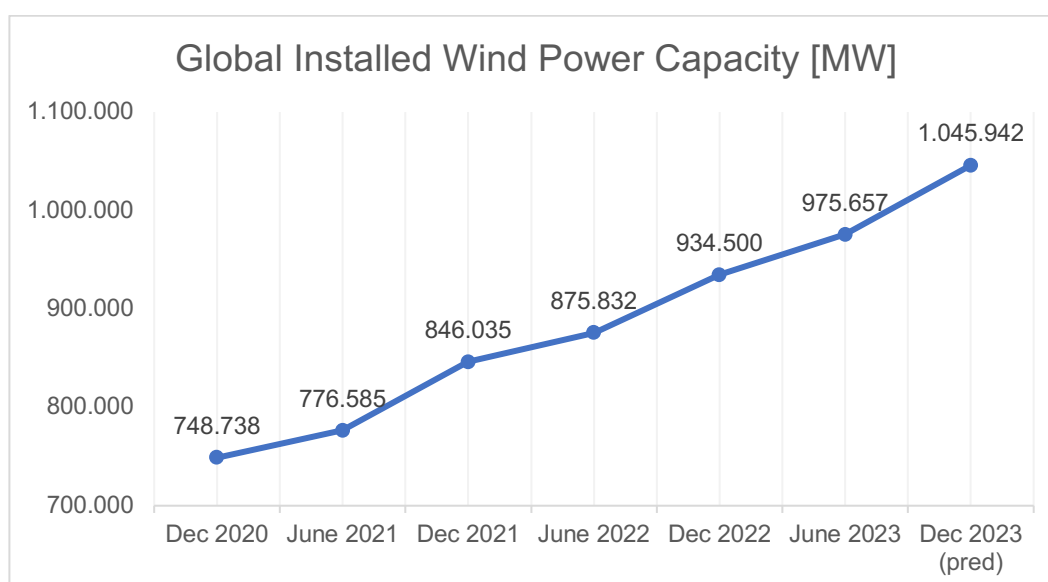


WWEA Half-year Report 2023

Additional Momentum for Windpower in 2023:

- **38% more new installations in first half of 2023 compared to 2022**
- **100 Gigawatt added between June 2022 and June 2023, reaching 976 GW**
- **Annual growth rate at 11,4%**
- **At least additional 110 Gigawatt new installations are expected for the full year**
- **A total capacity of 1 million Megawatt by end of 2023**

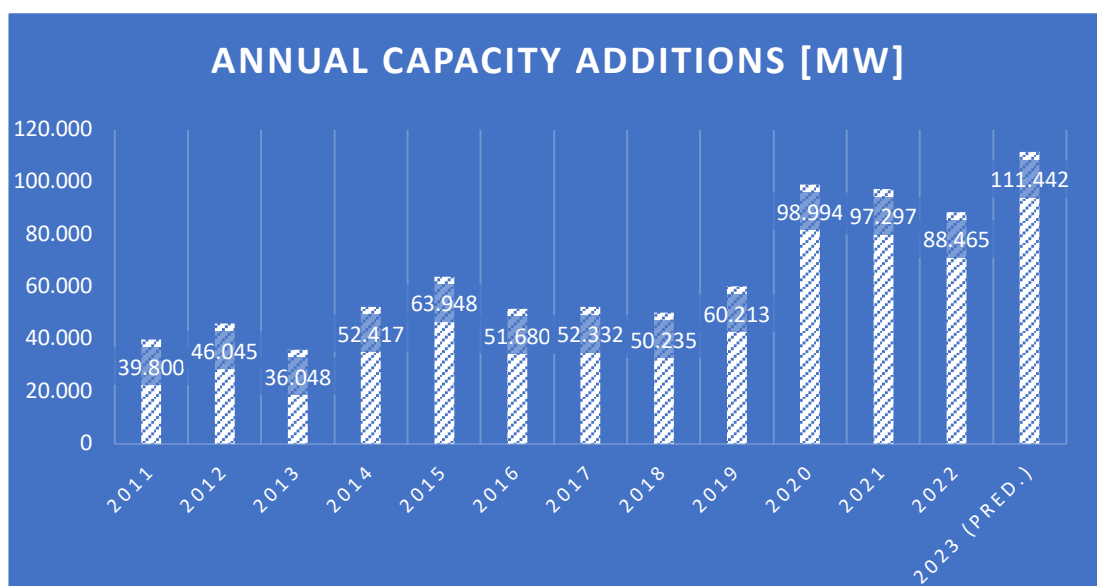
The World Wind Energy Association WWEA has gathered statistics on new wind power installations in the first six months of 2023. Based on a survey amongst WWEA's member associations from around the globe, WWEA has been able to publish an estimate of the global installations as of now and a prediction for the end of 2023.



While in the first half of 2022, 29,8 Gigawatt were added, the world installed 41,2 Gigawatt in the same period of 2023, 38% more than in 2022. This equals a year-to-year growth rate of 11,4%, when comparing the total installed capacity end of June 2022 and end of June 2023.

With this, the global installed capacity stood at 976 Gigawatt in June 2023, out of which 100 Gigawatt were added in the twelve months from July 2022 to June 2023. The sector shows clearly a more dynamic growth in the first half 2023, with a 4,4% semiannual growth, compared to 3,5% in the first half of 2022.

Constant growth is expected in the second half of 2023. Accordingly and based on the estimations of our members, WWEA expects a total new capacity addition of at least 110 Gigawatt throughout the whole year 2023, which would represent a new all-time high, after only 88 Gigawatt in 2022. The numbers presented in this report are based on official statistics and on estimations by WWEA.



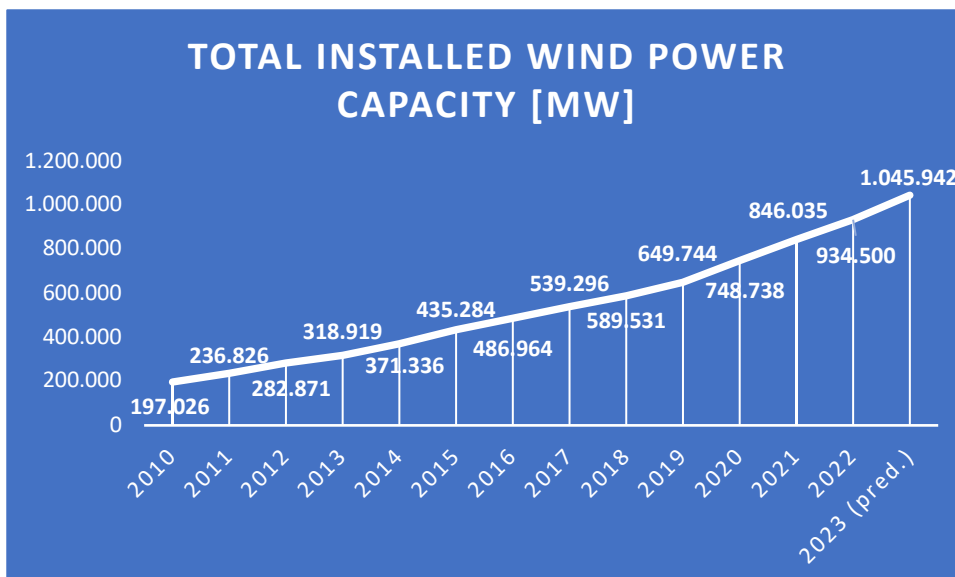
With this, the globally installed wind capacity will soon cross the threshold of 1 million Megawatt and will reach more than 1045 Gigawatt by end of 2023.

China represents the by far largest market share with an added capacity of 23,8 Gigawatt. With India, Brazil and the USA, three countries added more than 2 Gigawatt within the first six months of 2023. Germany and France showed the strongest growth in Europe, each adding above 1 Gigawatt.

Rank	Country/Region	Dec 2023 (predicted)	New 1-6/23	Jun 23	Dec 22	Jun 22	Dec 21	Jun 21	Dec 20
1	China	450.000	23.770	419.400	395.630	359.770	346.670	301.750	290.750
2	United States	152.000	2.249	146.433	144.184	139.145	135.347	129.283	122.328
3	Germany	69.000	1.559	67.765	66.206	64.610	63.924	63.542	62.708
3	India	45.000	2.340	43.940	41.600	40.900	39.800	39.600	38.625
4	Spain	30.500	212	30.371	30.159	29.663	28.143	27.977	27.294
5	United Kingdom	30.500	569	29.332	28.763	27.844	25.748	24.876	24.458
6	Brazil	29.253	2.306	25.967	23.661	21.813	21.567	19.100	18.010
7	France	26.500	1.044	22.442	21.398	20.416	19.084	18.310	17.949
8	Canada	16.849	550	15.762	15.212	14.560	14.206	13.790	13.627
9	Sweden	16.328	815	15.042	14.227	13.328	12.173	NA	10.068
10	Turkey	15.000	173	12.118	11.945	11.642	11.100	N/A	9.305
11	Italy	12.300	300	11.800	11.500	11.180	11.322	11.000	10.850
12	Australia	11.500	705	10.839	10.134	N/A	9.126	N/A	7.296
13	Netherlands	8.800	300	8.700	8.400	8.200	7.846	7.300	6.784
14	Mexico	7.500	5	7.317	7.312	N/A	7.262	N/A	6.789
	Rest of the World (estimated 2023)	124.912	4.260	108.429	104.169	112.761	92.717	120.057	81.897
	Total	1.045.942	41.157	975.657	934.500	875.832	846.035	776.585	748.738

WWEA President Hon. Peter Rae AO from Australia says:

“We are pleased about the good news that there is sound growth in the wind industry. Before the UN Climate Change Conference COP28 we can announce that the wind sector is ready to deliver on the official climate goals and beyond.”



WWEA Secretary General Stefan Gsänger:

“After the slowdown in 2022, the wind sector is slowly regaining momentum, as the half-year figures show. Governments' responses to Russia's war on Ukraine to increase energy security through higher shares of renewables are starting to take effect.

To achieve 100% renewable energy globally, action now needs to focus on bottom-up processes. Citizens and communities around the world need to be empowered to become drivers of the great transformation. People realising the benefits of using domestic renewable resources will be the unstoppable force for a climate-friendly, peaceful and more equitable world.”