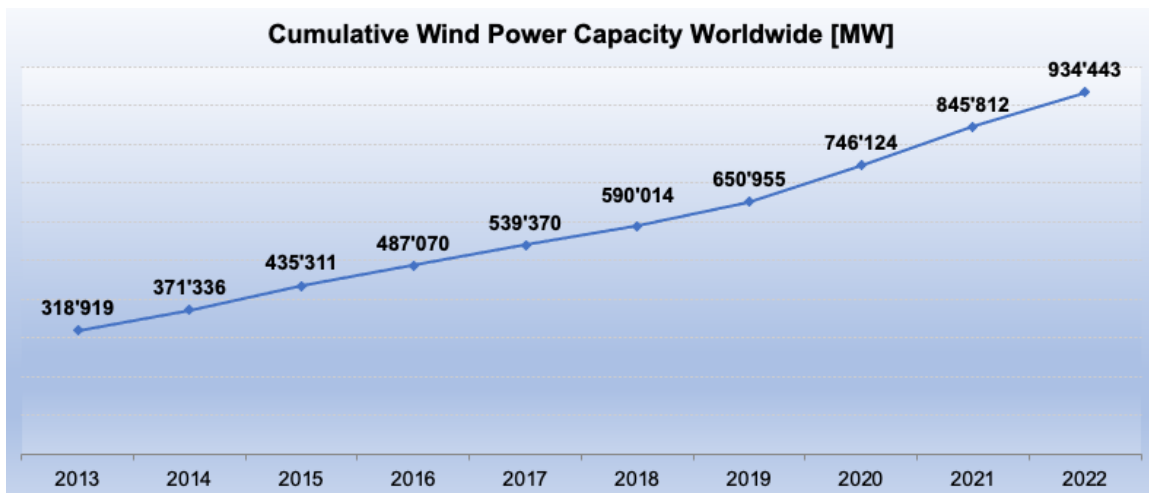


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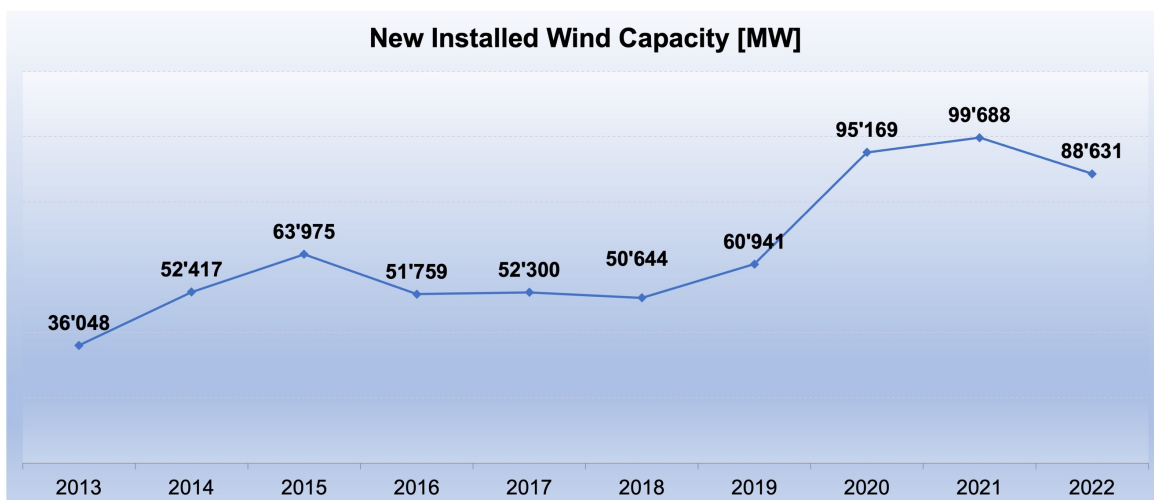
Wind Power Installations 2022 Stay Below Expectations

- Delays across the globe result in the lowest growth since 2019
- 88,6 Gigawatt of additional capacity added in 2022, equaling a growth rate of 10,5%, after 13,4% in 2021
- Global wind power capacity stands at 934 Gigawatt – 1000 Gigawatt expected to be exceeded in 2023

Bonn, 23 March 2023 (WWEA) – The development of new wind turbine installations around the globe slowed down substantially in the year 2022. Against what many experts predicted during 2022, the added capacity has reached only 88,6 Gigawatt, after close to 100 GW in 2021 and 95 Gigawatt in 2020.

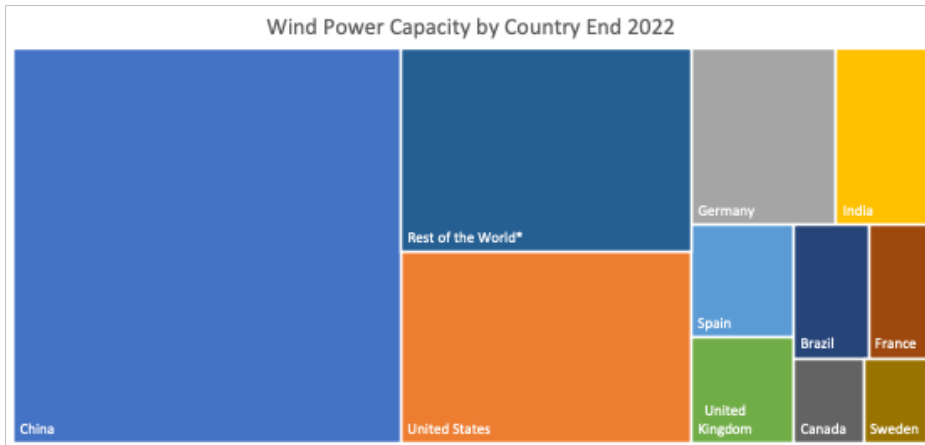


With few exemptions, almost all of the markets have not achieved their projections for the year 2022. The reasons are challenges in the wind turbine supply chains and still unfavourable policies. These are the main findings of the preliminary statistics published today by the World Wind Energy Association.



Top Five Markets

China, as the world market number one, saw strong growth although substantially less than in 2021. A weak wind power year can also be observed in remaining of the top five wind markets, in the USA, Germany, India and Spain. In contrast, Brazil has shown excellent performance with 4 GW of new capacity, making it clearly the third largest market for new wind turbines. In the foreseeable future, the country will become one of the five largest wind power markets.



Americas

The American continent saw rather weak developments aside from the USA (8,8 GW new capacity), with Canada adding one 1 GW, while Brazil has become the undisputed lead market in South America.

Africa

Wind power plays still only a marginal role in most African countries although major wind farms can today be found half a dozen African countries. Major investment in new turbines happened in the leading wind power country, South Africa, which added 0,4 GW amid a serious power crisis, as well as in Morocco.

Asia

In Asia, China continues to play a role on its own with 49 Gigawatt of new capacity added, substantially less than in 2021 and also below the expectations which experts raised during 2022. However, the country still represents 55% of the market volume for new turbines and 42% of the global wind power capacity. Stronger growth is expected in 2023.

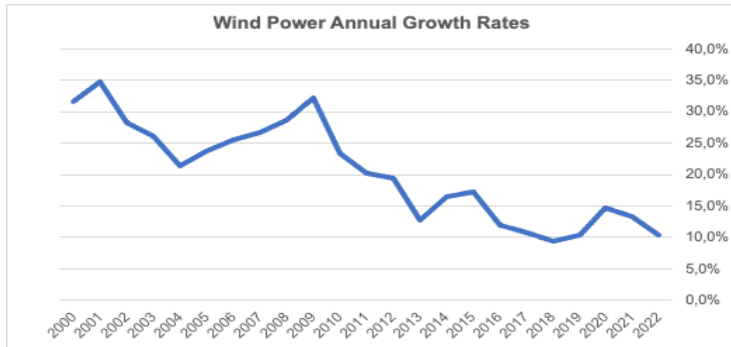
India added 2,2 Gigawatt, which brings the total capacity well above 40 GW. In order to meet the government's targets, the country will need to accelerate its deployment rates substantially and adjust regulatory frameworks – such step has just been announced.

Some Asian countries including Vietnam and Pakistan saw robust growth rates, while Japan and South Korea underperformed in 2022.

Europe

Europe has a new leader in terms of new installations: Finland added 2,4 GW in 2022, followed by the United Kingdom and Germany which have shown very similar growth, each adding 2,3 GW. Sweden added 2 GW, Spain 1,7 GW, followed by France and Poland, which both installed 1,5 GW.

Growth rates



The growth rate of the global wind sector has reached 10,5%, one of the lowest rates ever since modern wind power utilisation started 40 years ago. The most dynamic markets with the biggest growth rates of the year 2022 where Finland with 74%, Poland with 21%, Brazil with 19% and Sweden with 17%.

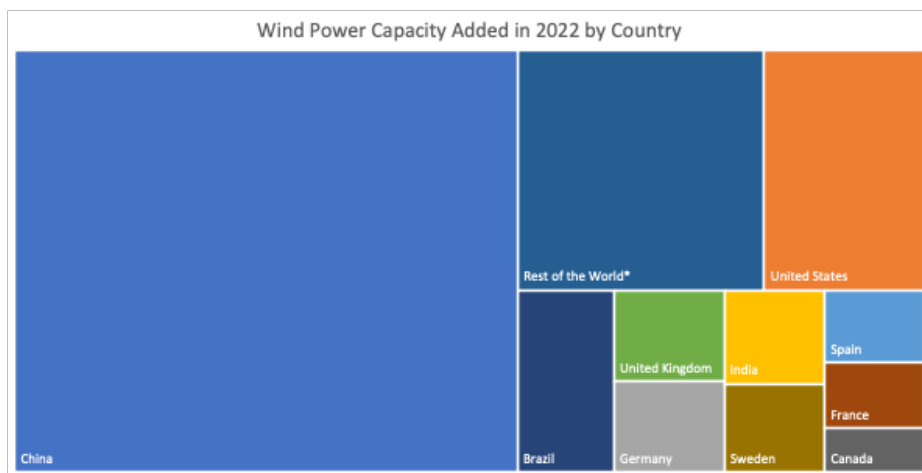
The biggest progress in the global ranking of all countries can be found in Finland which

jumped from 25th to 18th position, and Poland which climbed from 17 to 14. Turkey improved by one place and took over the 11th position from Italy.

Stefan Gsänger, WWEA Secretary General:

“The wind power market performance in 2022 is disappointing for us. With more than two years of covid recovery programs and six years after the Paris climate accord, we were slightly confident that the wind power industry has the basis for steady growth - although we noticed serious policy gaps. The war against Ukraine which led to huge energy market turbulences added more momentum to improve the investment frameworks for wind energy.

Unfortunately, as the results show us, the frameworks are not yet sufficient to allow the wind power sector to invest on the required scale. We call therefore on governments to improve policies for wind power. The wind sector needs stable and predictable remuneration schemes as well as smoother and faster permitting processes. Regulatory frameworks must also cater for strong engagement of local citizens and communities and support benefit sharing in order to strengthen the social support for wind power.”



Country/Region	2022	New Capacity 2022	Growth 2022/2021	2021	2020
China	395'630	48'960	14,1%	346'670	290'750
United States	144'184	8'837	6,5%	135'347	122'328
Germany	66'242	2'318	3,6%	63'924	62'708
India	41'983	2'183	5,5%	39'800	38'625
Spain	29'813	1'670	5,9%	28'143	27'294
United Kingdom	28'087	2'339	9,1%	25'748	24'458
Brazil	25'631	4'064	18,8%	21'567	18'010
France	20'600	1'516	7,9%	19'084	17'949
Canada	15'310	1'006	7,0%	14'304	13'627
Sweden	14'227	2'054	16,9%	12'173	10'068
Turkey	11'950	0'850	7,7%	11'100	9'305
Italy	11'848	0'526	4,6%	11'322	10'850
Australia	10'134	1'411	11,0%	9'126	7'296
Poland	8'617	1'517	21,4%	7'100	6'614
Netherlands	8'500	0'654	8,3%	7'846	6'784
Mexico	7'312	0'050	0,7%	7'262	6'789
Denmark	7'178	0'000	0,0%	7'178	6'235
Finland	5'677	2'421	74,4%	3'256	2'586
Portugal	5'671	0'043	0,8%	5'628	5'502
Belgium	5'305	0'303	6,1%	5'002	4'719
Norway	5'087	0'432	9,3%	4'655	3'980
Japan	4'802	0'228	5,0%	4'574	4'372
Greece	4'783	0'331	7,4%	4'452	4'113
Ireland	4'685	0'280	6,4%	4'405	4'355
Vietnam	3'966	0'735	15,2%	3'444	2'829
Chile	3'810	0'366	15,6%	3'297	3'120
Austria	3'573	0'276	8,6%	3'291	2'818
South Africa	3'560	0'397	10,2%	3'231	0'513
Argentina	3'309	0'018	4,6%	3'163	2'495
Romania	3'077	0'048	1,6%	3'029	3'029
Rest of the World*	29'892	2'797	12,0%	26'692	22'003