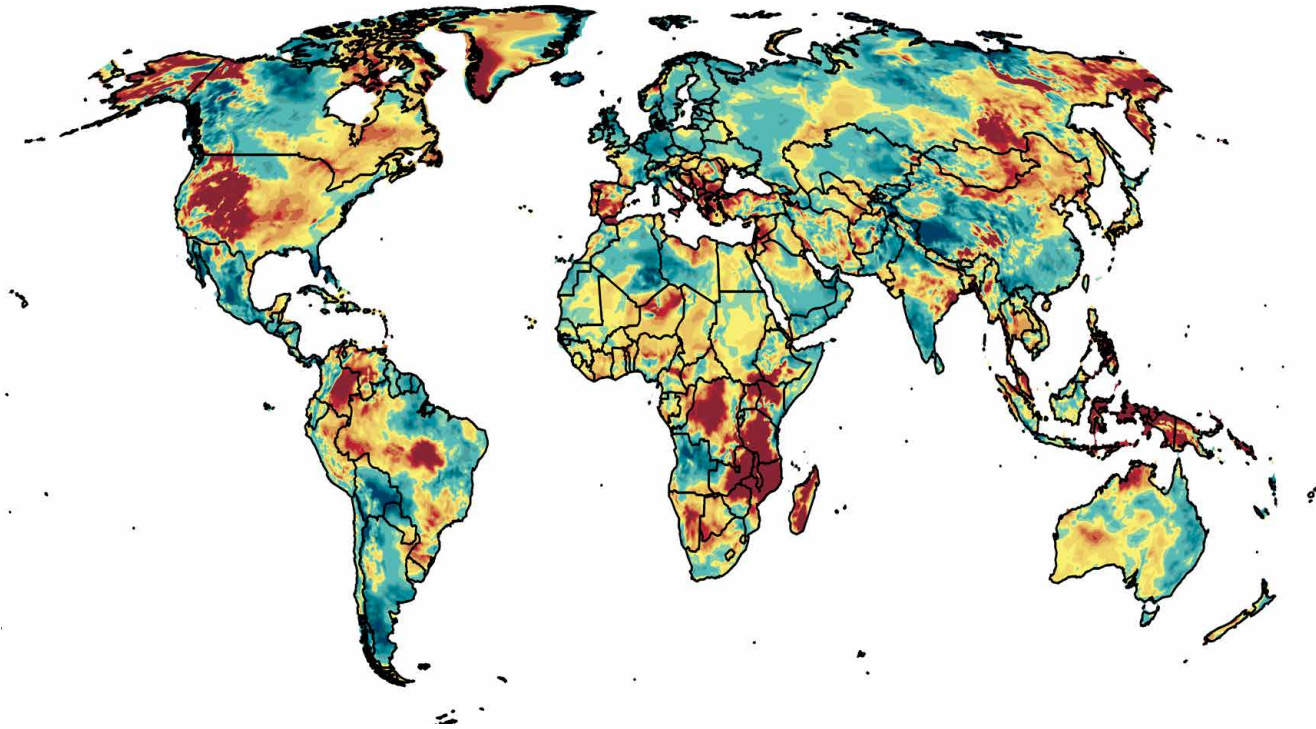




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Wind Trends

Global wind speed performance



The Wind Trends Bulletin depicts anomalies of the global wind resource from the historical norm on a monthly, quarterly, and annual basis. The anomalies are calculated as a percent deviation from the 1995 – 2019 mean speed at 100 m above ground level for the calendar period. The latest Wind Trends dataset is derived using the ERA5, a contemporary global reanalysis dataset. For more information about customized analyses for your project portfolio, data or subscription options, please contact us at renewableenergyservices@ul.com.

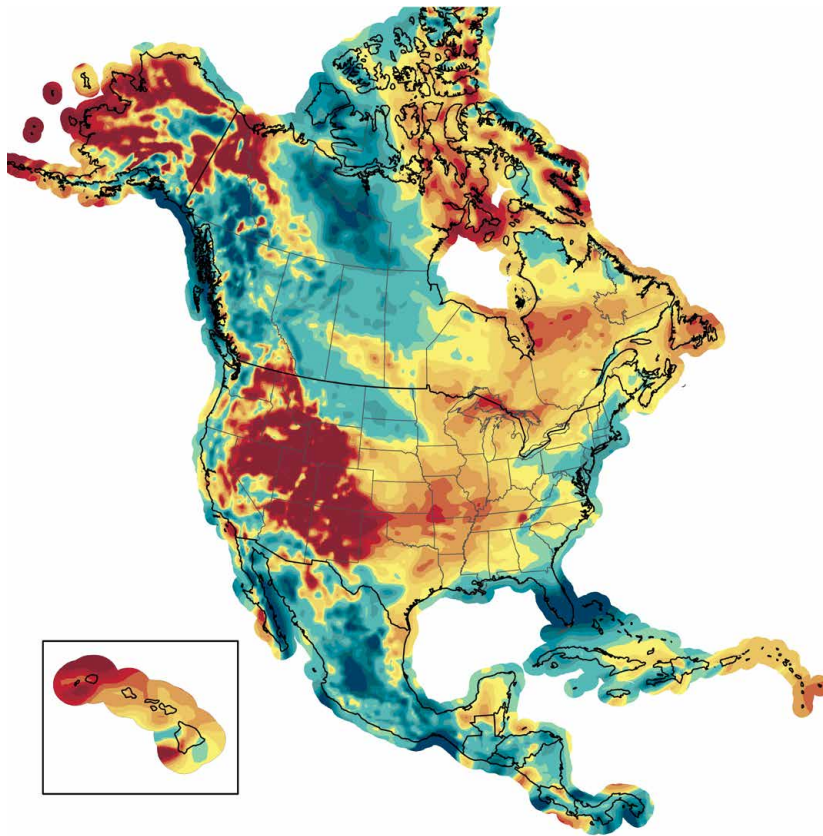
[Download](#) index values for even more wind power producing countries!



above average
wind speeds

Wind Speed Anomaly (%)

below average
wind speeds



2021 | December

North America



Wind plant locations source:
Windpower Monthly Intelligence

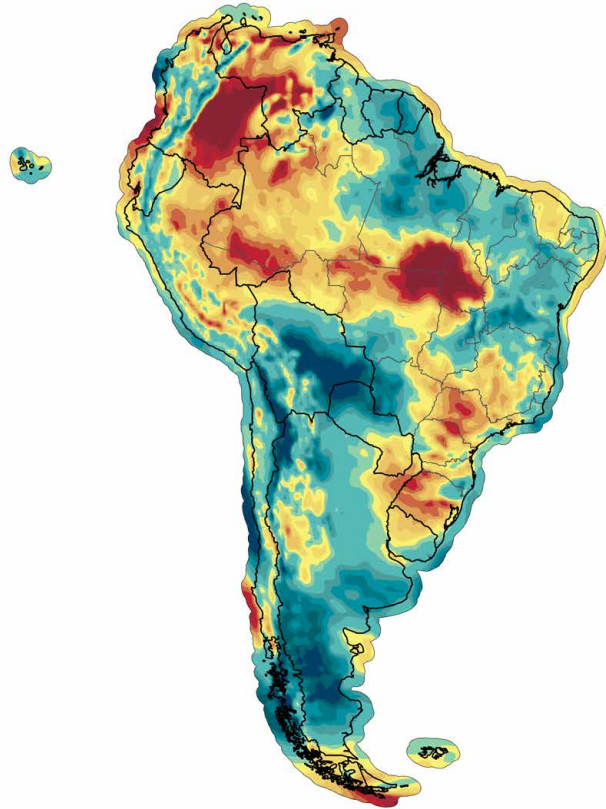


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Global wind speed performance

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South America



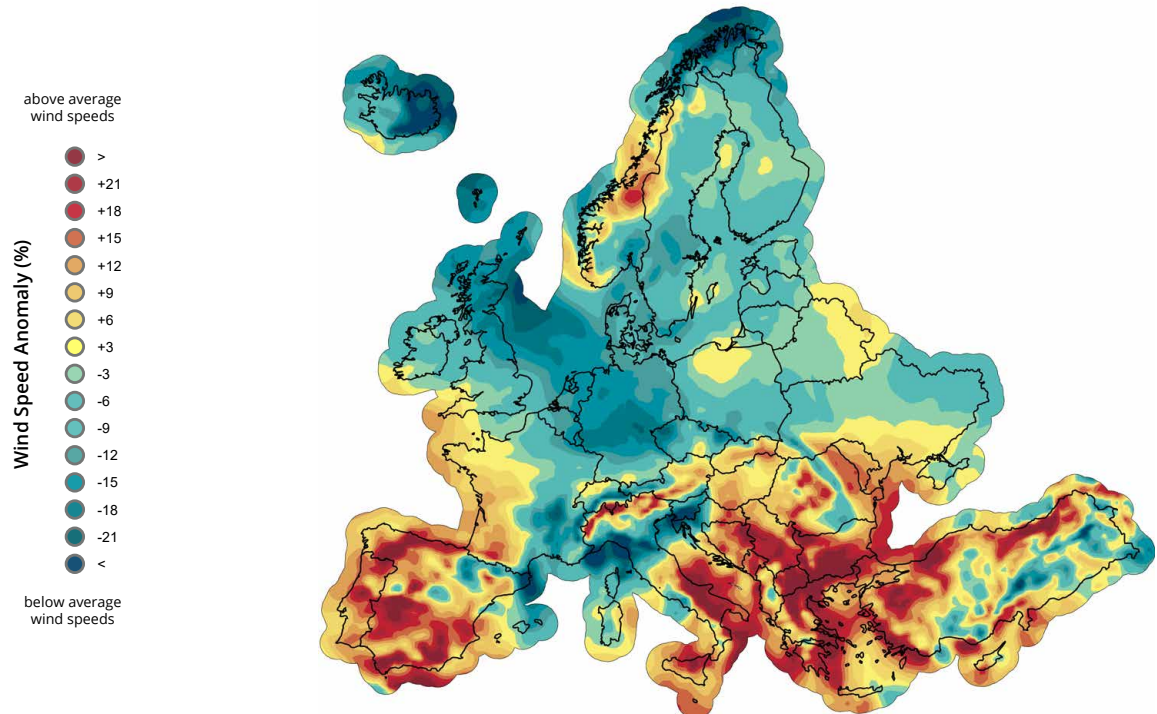
Wind plant locations source:
Windpower Monthly Intelligence



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Global wind speed performance

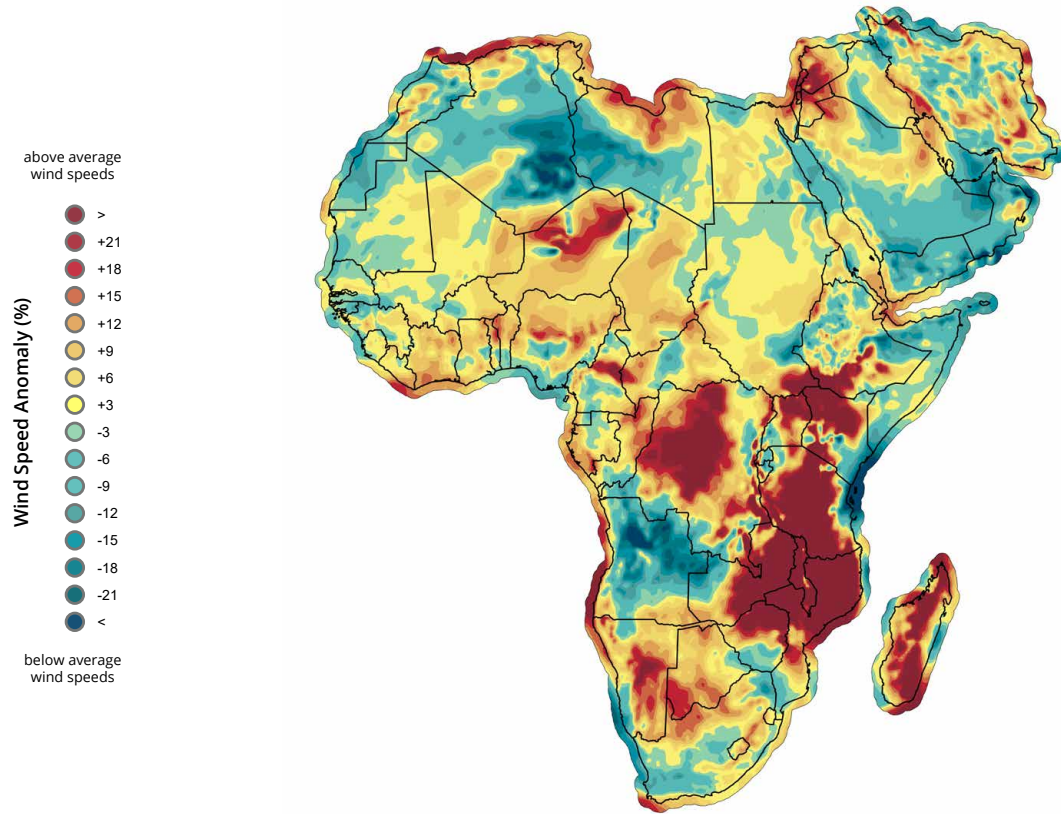
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Wind plant locations source:
Windpower Monthly Intelligence





Wind plant locations source:
Windpower Monthly Intelligence



Wind Trends
 Global wind speed performance

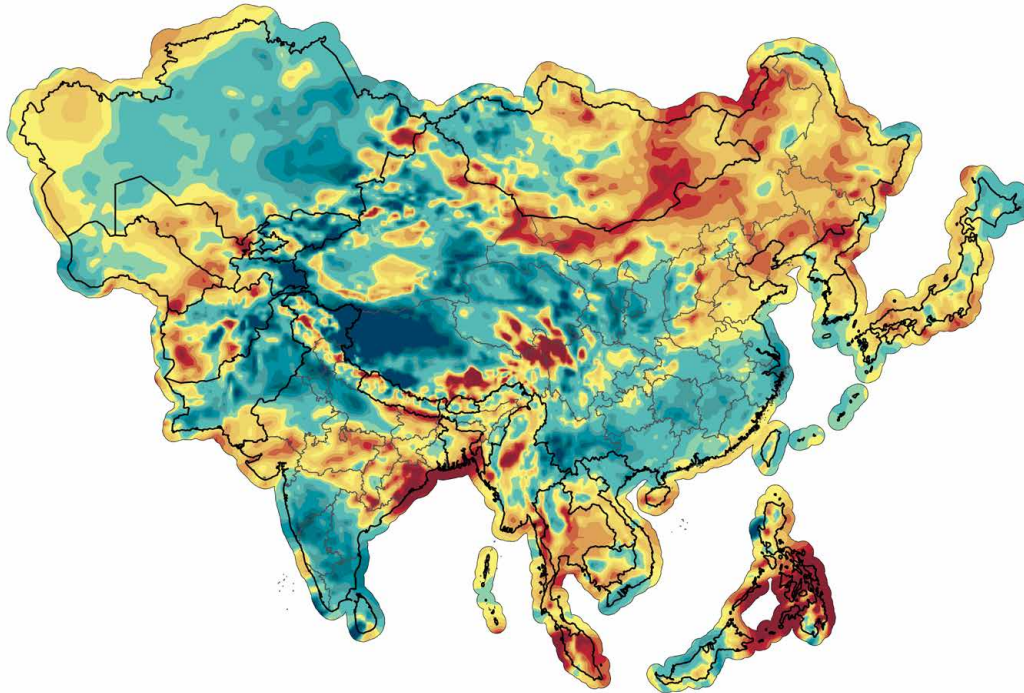
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above average
wind speeds

Wind Speed Anomaly (%)

below average
wind speeds



2021 | December

Asia



Wind plant locations source:
Windpower Monthly Intelligence



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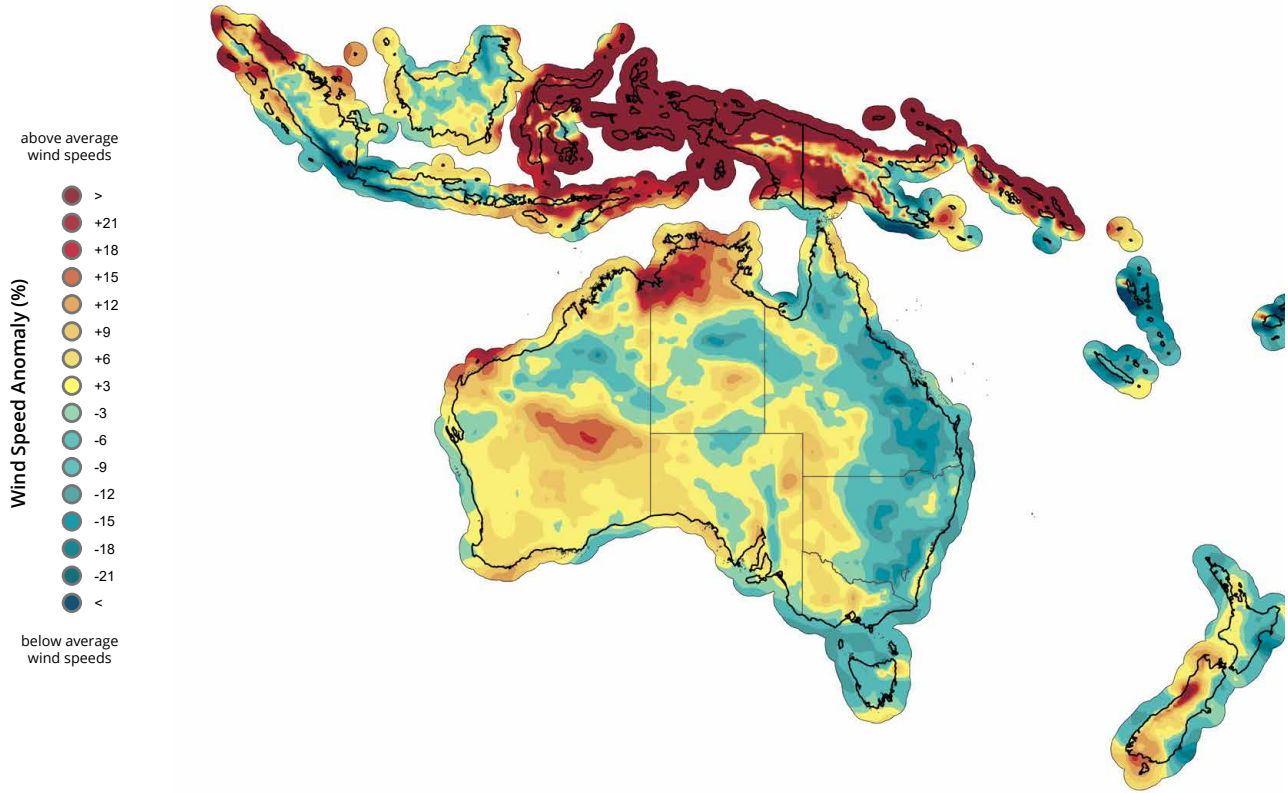


2021 | December

Oceania



Wind plant locations source:
Windpower Monthly Intelligence



above average
wind speeds

Wind Speed Anomaly (%)



below average
wind speeds



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Locations	Jan	Feb	Mar	Q1	Apr	May	Jun	Q2	Jul	Aug	Sep	Q3	Oct	Nov	Dec	Q4	ANNUAL
North America	-4.9	-1.5	8.1	0.5	-3.4	-1	-4	-2.9	-6	4.4	3.7	0.7	-1.6	0.3	-6.1		
USA	-4.2	-1.3	7.6	0.7	-3.3	-1.5	-4.7	-3.2	-6.5	5.7	3.6	0.9	0.2	0.2	7.5		
Canada	-12.1	-2.6	14.2	-0.4	-6	-3.7	9.7	-0.5	-2.8	-1	8.6	1.9	-11.8	1.5	2.1		
Mexico	-3.7	-4.1	5.8	-0.7	0.2	9	-18.3	-2.3	-5.6	-3.8	-1.9	-3.9	-9.9	-0.5	-8.7		
South America	7.4	-5.4	-0.3	0.7	1.9	-1	-4.7	-1.7	-2.3	-0.2	-3.1	-1.8	-3.6	-7.7	-4.6		
Brazil	10.2	-5.8	1.2	2	3.5	-2.5	-5.9	-2.2	-3.2	1	-4.2	-2.1	-5.7	-10.5	-4.6		
Argentina	1.1	-4.9	-3.1	-2.2	-4.7	0.6	-4.1	-2.8	3.9	1.3	-1	1.4	4.3	-4.5	-10.2		
Chile	-0.1	-4.2	-2.8	-2.4	-0.8	-0.1	-5.1	-2.1	-8.8	0.5	-0.7	-2.8	3.1	-2.9	-2.9		
Europe	-1.7	1.3	-3.8	-1.5	-4.4	7.9	-10.7	-2.4	-2.9	0.6	-9	-4	3.2	-5.1	-1.1		
Germany	-8.9	-7.8	-4.7	-7.2	1.6	17.3	-19.7	0.1	-8.6	6.1	-14.7	-6.1	5	-10.6	-12.7		
Spain	11.7	8.2	-10.7	3.1	-15.1	1.5	-3.5	-6.2	3.7	-2.8	-7.6	-2.2	-7.1	0.2	7.6		
France	-2.0	5.3	-1.5	0.6	-2.5	21	-16.4	1	6.2	6.2	-14	-0.9	3.1	-16.8	-2.7		
United Kingdom	-18.5	14.9	2	-0.7	-21	-8	-6	-12	-28.6	-16.4	-16.2	-20.1	2.2	3	-11.6		
Italy	19.9	-10.3	-10.9	-0.6	-4.3	13.2	-8.7	0.3	1.4	7.9	-13.4	-1.8	11.7	-2	14.3		
Portugal	10.9	15.4	-9.6	5.4	-23	4.8	0	-6.6	6.7	-7.7	4.4	1.1	-5.9	-5.9	13.6		
Denmark	-15.1	-3.1	-3.4	-7.4	4.5	-6.9	-13.7	-5.2	-4.3	5.1	-13.6	-4.6	3.1	-5.5	-9.6		
Ireland	-15.9	15.8	-0.1	-0.2	-15	-1.8	-4.6	-7.3	-25.7	-12.5	-17.2	-18.3	-4.4	-7.7	-2.4		
Africa / Middle East	3.8	0.5	1.8	2.1	-3.7	2.3	3.4	0.7	4.4	-3.5	2.9	1.3	5.3	-3.6	0.6		
South Africa	-0.1	1.6	-1.1	0.2	-9	4.4	2.3	-0.5	5.3	-3.2	5.3	2.5	5.4	-3.2	-1.5		
Morocco	6.7	-4.6	-7.1	-1.8	-13.3	4.8	1.3	-2.6	9.3	-3.8	-4	0.5	8.6	0	0		
Egypt	3.1	11.7	11.8	9.1	9.6	7	7.5	8	4.5	-3.7	6.5	2.4	9	-7.7	-4.3		
Asia	10.4	3.4	-3.8	2.9	-4.6	5	-1.8	-0.5	1.2	-2.4	-3.7	-1.8	2	7.8	-0.2		
China	12.0	4.2	-4.4	3.4	-4.4	6.6	-1	0.3	1.8	-2	-4.5	-1.6	2.9	8.3	0.2		
India	-0.9	-3.9	0.7	-1.6	-7.7	-6.9	-8.2	-7.8	-2.6	-7	3.3	-2.8	-4.4	4.6	-4.4		
Thailand	10.4	5.2	-6.5	3.3	-12.5	-7.8	10.5	-1.8	2.5	-14.3	-7.1	-6.2	1.4	5.3	9.9		
Ind, Aus, Oceania	3.6	-0.1	-2.5	0.4	-1.1	3.5	-1.2	0.4	11.3	1.7	4	5.6	-3	-0.2	-1.7		
Australia	3.6	1	-1.9	0.9	-1.6	3.4	-0.8	0.4	12.7	1.1	3.3	5.6	-1.8	0.6	-2		
New Zealand	4.7	-18.3	-11.4	-8	1.7	3.6	-4.5	0.3	-3.7	10.9	16.4	8	-14.8	-9.5	0.2		
World	3.5	1.3	-0.8	1.1	-4	4.1	-4.6	-1.6	-1.5	0.1	-3.1	-1.6	1.2	1.9	0.8		

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Wind index

The wind index represents the average wind speed anomaly across all plants of the country or region in production by the end of 2020. The anomalies are calculated as a percent deviation from the 1995 – 2019 mean speed at 100 m above ground level for the calendar period, and are weighted by the location and rated capacity of wind projects.

The wind project details have been obtained from [Windpower Monthly Intelligence](#).

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