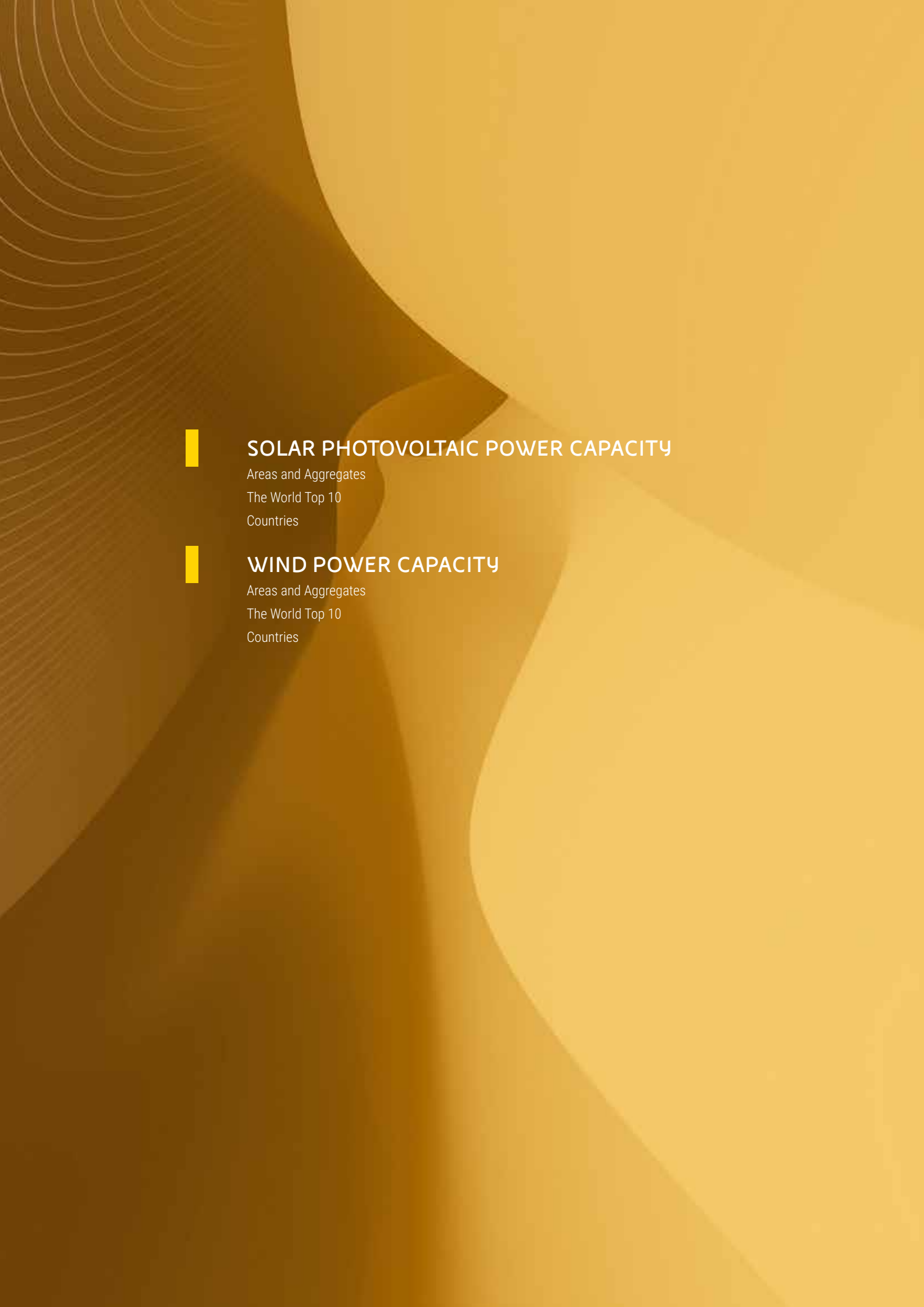




Renewables



SOLAR PHOTOVOLTAIC POWER CAPACITY

Areas and Aggregates

The World Top 10

Countries



WIND POWER CAPACITY

Areas and Aggregates

The World Top 10

Countries

Executive summary

In 2024, the **installation of intermittent renewable energy sources (solar photovoltaic and wind)** continued to grow at a steady pace, with an increase of 560 GW compared to 2023 – a new global record – bringing the total installed capacity to nearly 3,000 GW worldwide.

Solar power remained the primary driver of renewable energy growth in 2024. Newly installed capacity reached around 450 GW, marking a 32% increase compared to 2023. China led this surge by adding 278 GW (+46% compared to 2023), with a compound annual growth rate (CAGR) of 62% from 2010 to 2024. The United States followed with 38 GW of new capacity (+28% from 2023). By the end of 2024, the total cumulative solar capacity had slightly exceeded 1,850 GW, with China and the United States accounting for 48% and 9% of global capacity, respectively.

Wind power also experienced significant growth, although at a slower pace. In 2024, wind capacity increased by 113 GW compared to 2023, reflecting an 11% rise and bringing the total to 1,133 GW by year-end. Again, China and the United States stood out as the leading players, holding 46% and 14% of global wind capacity, respectively. Notably, China alone contributed over 70% of the newly installed wind capacity during the year.

Solar Photovoltaic Power Capacity

Areas and Aggregates^(*)

(MW)

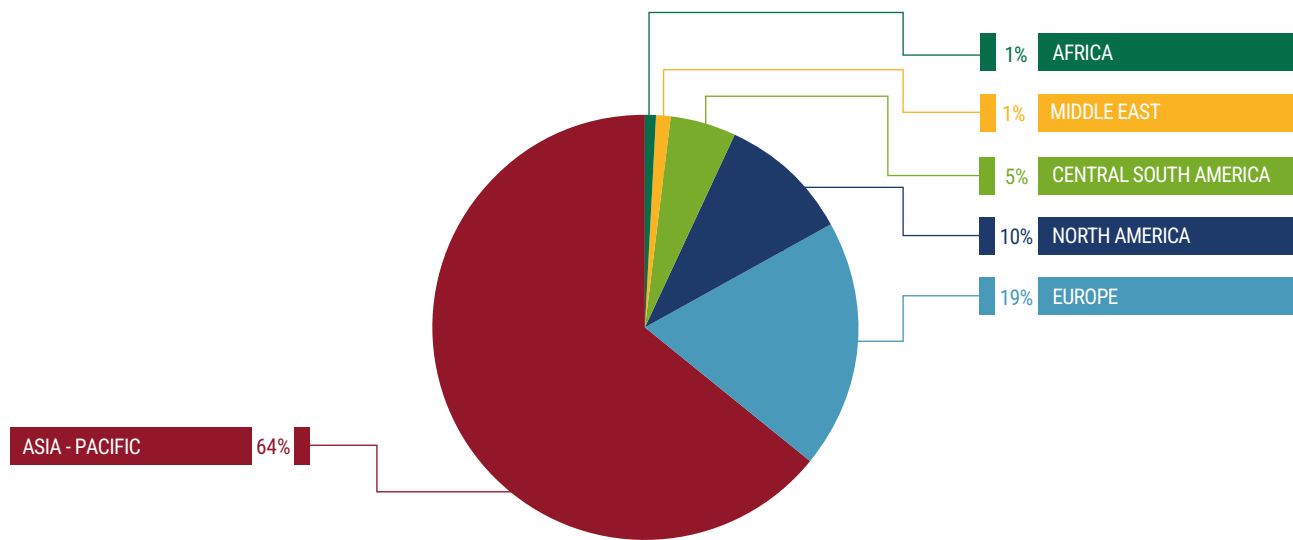
	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Europe	29,991	96,411	143,411	164,117	192,220	229,816	288,584	355,952	23.3%	19.3%
Russia and Central Asia	0	426	2,027	2,780	3,242	3,820	4,721	6,936	46.9%	104.5%
Middle East	84	1,046	5,627	7,663	9,817	13,569	18,909	22,106	16.9%	48.9%
Africa	158	1,789	8,194	9,559	10,485	11,529	12,431	14,293	15.0%	38.0%
Asia - Pacific	6,635	95,141	345,775	430,652	511,840	628,948	872,835	1,191,547	36.5%	44.9%
Americas	3,265	27,573	81,251	102,461	132,859	166,276	209,204	267,788	28.0%	37.0%
- North America	3,125	25,356	63,836	79,072	99,172	118,319	143,609	182,096	26.8%	33.7%
- Central South America	140	2,217	17,415	23,389	33,688	47,957	65,595	85,692	30.6%	58.2%
World	40,133	222,386	586,285	717,232	860,464	1,053,958	1,406,684	1,858,622	32.1%	31.5%
European Union 27	29,750	84,296	115,342	132,885	157,972	191,640	244,567	302,110	23.5%	18.0%
MENA	118	1,139	7,793	9,844	12,039	16,025	21,899	26,091	19.1%	47.1%
OECD	38,537	162,682	298,766	352,027	417,623	490,644	587,270	706,913	20.4%	23.1%
NON OECD	1,596	59,704	287,519	365,206	442,841	563,314	819,415	1,151,709	40.6%	60.0%
OPEC	19	160	2,699	3,496	4,244	5,141	9,468	11,543	21.9%	57.8%
NON OPEC	40,114	222,226	583,587	713,736	856,220	1,048,817	1,397,217	1,847,079	32.2%	31.5%

^(*) Data source: Eni's calculations on IRENA (2025), *Renewable capacity statistics 2025*, International Renewable Energy Agency, Abu Dhabi, data.

Solar Photovoltaic Power Capacity

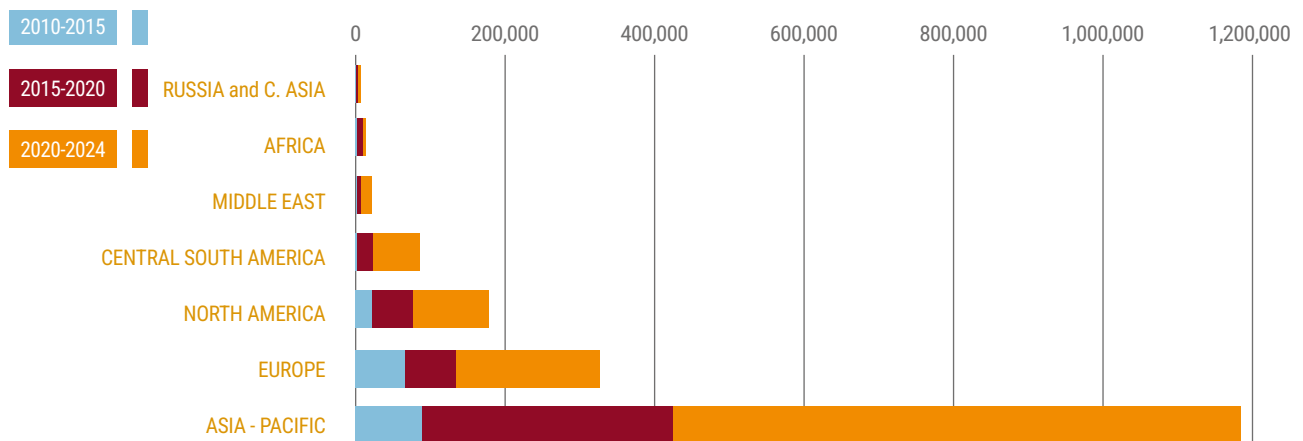
World Solar Photovoltaic Power Capacity (2024)

1,858,622 MW



World Solar Photovoltaic Power Capacity Growth (2010-2024)

1,818,489 MW



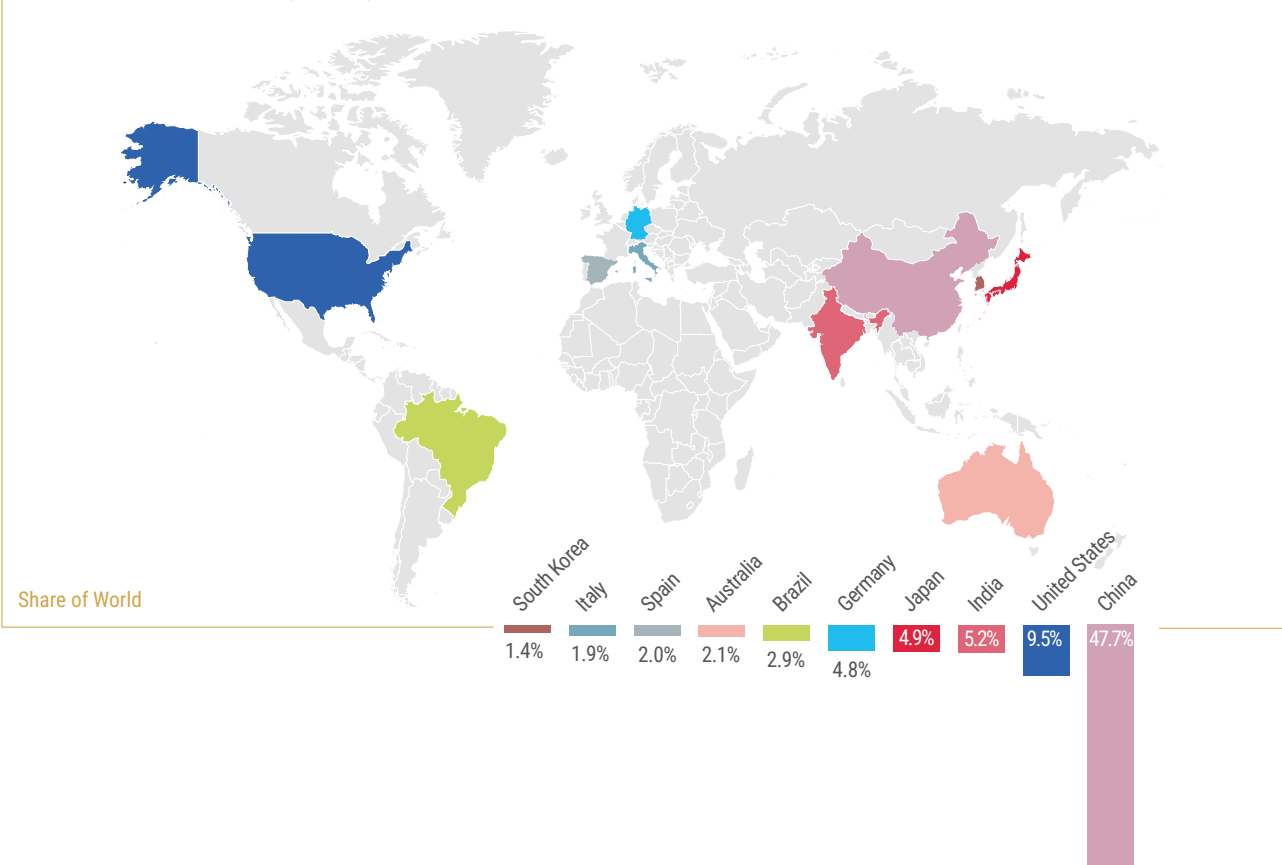
Solar Photovoltaic Power Capacity

The World Top 10^(*)

(MW)

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
China	1,022	43,538	204,575	253,414	306,403	392,462	609,351	887,360	45.6%	62.1%
United States	2,909	22,479	59,829	74,693	93,911	112,881	137,725	175,990	27.8%	34.1%
India	69	5,368	34,908	39,363	49,607	63,048	72,517	97,042	33.8%	67.9%
Japan	3,618	34,150	63,192	71,868	78,413	85,066	89,077	91,610	2.8%	26.0%
Germany	18,004	38,599	47,485	51,783	57,461	61,188	74,882	89,943	20.1%	12.2%
Brazil	3	49	4,706	8,482	14,511	25,399	37,940	53,113	40.0%	103.3%
Australia	1,088	5,032	15,450	19,769	24,393	28,884	33,279	38,469	15.6%	29.0%
Spain	3,902	4,737	8,842	10,171	13,752	23,934	29,616	36,285	22.5%	17.3%
Italy	3,592	18,737	20,620	21,354	22,281	24,555	29,351	36,008	22.7%	17.9%
South Korea	651	3,467	10,847	14,756	17,905	20,525	23,493	26,645	13.4%	30.4%
The World Top 10	34,857	176,156	470,454	565,653	678,637	837,942	1,137,232	1,532,466	34.8%	31.0%
Rest of the World	5,276	46,230	115,832	151,580	181,827	216,016	269,452	326,156	21.0%	34.3%
World	40,133	222,386	586,285	717,232	860,464	1,053,958	1,406,684	1,858,622	32.1%	31.5%

The World Top 10 (2024)



(*) Data source: Eni's calculations on IRENA (2025), *Renewable capacity statistics 2025*, International Renewable Energy Agency, Abu Dhabi, data.

Solar Photovoltaic Power Capacity

Countries^(*)

(MW)

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Europe	29,991	96,411	143,411	164,117	192,220	229,816	288,584	355,952	23.3%	19.3%
Albania	0	1	14	21	23	100	207	307	48.4%	60.7%
Austria	92	940	1,703	2,037	2,771	3,757	6,331	8,481	34.0%	38.1%
Belarus		6	154	160	164	273	273	265	-2.8%	
Belgium	840	3,108	4,523	5,453	5,934	6,781	8,352	9,752	16.8%	19.1%
Bosnia Herzegovina	0	8	22	35	57	102	212	212	0.0%	59.8%
Bulgaria	25	1,028	1,044	1,100	1,275	1,737	2,908	3,908	34.4%	43.5%
Croatia	0	48	85	109	138	222	463	860	85.9%	76.6%
Cyprus	7	76	151	229	315	424	581	724	24.6%	39.3%
Czech Republic	1,727	2,075	2,085	2,124	2,177	2,404	3,251	4,159	27.9%	6.5%
Denmark	7	782	1,080	1,304	1,704	3,070	3,529	3,945	11.8%	57.1%
Estonia	0	7	121	208	395	520	813	1,326	63.1%	97.0%
Finland	7	17	210	299	398	649	986	1,203	22.0%	44.4%
France	1,044	6,820	10,013	11,133	13,446	14,722	17,399	21,528	23.7%	24.1%
Germany	18,004	38,599	47,485	51,783	57,461	61,188	74,882	89,943	20.1%	12.2%
Greece	202	2,604	2,754	3,174	4,073	5,104	6,689	9,269	38.6%	31.4%
Hungary	2	172	1,400	2,131	2,968	4,235	5,910	7,699	30.3%	80.3%
Iceland		3	7	7	7	7	7	7	0.0%	
Ireland	1	5	102	163	247	345	888	1,340	50.9%	63.9%
Italy	3,592	18,737	20,620	21,354	22,281	24,555	29,351	36,008	22.7%	17.9%
Kosovo		0	10	10	14	14	20	20	0.0%	
Latvia			3	5	7	113	319	466	46.1%	
Lithuania	0	67	130	244	422	738	1,324	2,567	93.9%	106.5%
Luxembourg	29	116	160	187	277	317	394	523	32.7%	22.8%
Malta	1	74	151	180	194	209	226	233	3.3%	50.0%
Moldova		1	5	4	14	60	201	344	71.5%	
Montenegro				3	3	3	17	30	74.3%	
Netherlands	90	1,526	7,228	11,110	14,823	17,356	21,275	24,048	13.0%	49.1%
North Macedonia		17	0	79	79	144	506	833	64.6%	
Norway	9	15	137	143	184	341	653	802	22.8%	37.7%
Poland		103	1,495	3,795	7,091	11,063	16,428	20,199	23.0%	
Portugal	134	452	970	1,191	1,817	2,817	4,040	5,808	43.8%	30.9%
Romania	0	1,326	1,398	1,383	1,394	1,809	2,988	4,688	56.9%	
Serbia	3	16	23	31	52	137	197	241	22.3%	35.9%
Slovakia	19	533	590	535	537	549	593	867	46.2%	31.4%
Slovenia	12	239	278	370	461	626	1,031	1,309	27.0%	39.8%
Spain	3,902	4,737	8,842	10,171	13,752	23,934	29,616	36,285	22.5%	17.3%
Sweden	11	104	714	1,107	1,606	2,388	3,993	4,963	24.3%	54.7%
Switzerland	125	1,360	2,425	2,875	3,515	4,528	6,094	7,794	27.9%	34.3%
Türkiye	6	249	5,995	6,667	7,816	9,425	11,292	19,882	76.1%	79.1%
Ukraine	3	841	5,936	7,331	8,062	8,062	8,062	5,500	-31.8%	73.3%
United Kingdom	95	9,601	13,345	13,870	14,261	14,981	16,275	17,603	8.2%	45.2%
Others Europe		0	2	3	5	6	9	9	0.0%	

^(*) Data source: Eni's calculations on IRENA (2025), *Renewable capacity statistics 2025*, International Renewable Energy Agency, Abu Dhabi, data.

Solar Photovoltaic Power Capacity

Countries^(*)

(MW)

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Russia and Central Asia	0	426	2,027	2,780	3,242	3,820	4,721	6,936	46.9%	104.5%
Russia	0	363	1,425	1,774	1,988	2,148	2,193	2,554	16.5%	
Armenia			21	51	146	235	402	485	20.8%	
Azerbaijan	0	5	33	35	48	51	282	293	3.9%	63.5%
Georgia			3	5	18	35	64	133	107.0%	
Kazakhstan		57	542	912	1,038	1,146	1,306	1,196	-8.4%	
Uzbekistan		1	4	4	4	204	475	2,275		
Others Central Asia				0	0	0	0	0	0.0%	

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Middle East	84	1,046	5,627	7,663	9,817	13,569	18,909	22,106	16.9%	48.9%
Bahrain		5	10	10	21	46	57	66	16.6%	
Iran	0	9	346	430	456	539	595	782	31.4%	72.2%
Iraq		37	37	37	37	42	42	42	0.0%	
Israel	70	790	1,890	2,410	3,349	4,390	5,274	5,363	1.7%	36.3%
Jordan	0	57	971	1,541	1,811	1,966	1,990	2,077	4.4%	
Kuwait		3	33	33	33	50	50	50	0.0%	
Lebanon	0	11	76	90	190	875	1,005	1,005	0.0%	77.3%
Oman		2	26	129	155	655	672	672	0.0%	
Qatar		4	5	5	5	805	805	1,680	108.7%	
Saudi Arabia	2	24	59	359	389	390	2,535	4,290	69.2%	71.0%
Syria			2	12	33	60	60	60	0.0%	
United Arab Emirates	11	31	1,835	2,232	2,902	3,296	5,342	5,411	1.3%	55.9%
Yemen		60	254	258	258	264	290	410	41.4%	
Others Middle East		12	82	117	178	192	192	197	2.9%	

^(*) Data source: Eni's calculations on IRENA (2025), *Renewable capacity statistics 2025*, International Renewable Energy Agency, Abu Dhabi, data.

Solar Photovoltaic Power Capacity

Countries^(*)

(MW)

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Africa	158	1,789	8,194	9,559	10,485	11,529	12,431	14,293	15.0%	38.0%
Algeria		37	342	342	342	426	437	437	0.0%	
Angola		0	1	1	1	285	310	362	16.6%	
Benin		1	4	5	6	33	35	35	0.0%	
Cameroon	0	0	13	14	26	26	63	63	0.0%	86.7%
Chad	0	0	1	1	2	2	2	2	4.7%	62.2%
Congo		0	0	1	1	1	1	1	0.0%	
Côte d'Ivoire		0	4	6	8	9	40	40	0.0%	
Dem. Rep. Congo		1	10	14	18	22	25	25	0.0%	
Egypt	15	16	1,627	1,623	1,643	1,705	1,836	2,570	40.0%	44.4%
Equatorial Guinea			0	0	0	0	0	0	0.0%	
Ethiopia	0	10	12	20	21	21	21	22	1.7%	60.8%
Gabon	0	0	0	0	0	1	1	12		57.5%
Ghana		32	83	108	165	169	188	188	0.0%	
Kenya	0	30	126	146	217	318	369	369	0.0%	71.4%
Libya	4	5	5	5	6	6	8	8	0.0%	6.0%
Madagascar	0	0	23	24	24	53	58	58	0.0%	88.7%
Mauritania		18	88	88	88	89	123	157	27.6%	
Morocco	14	20	194	234	314	314	394	394	0.0%	27.2%
Mozambique		3	43	45	46	88	103	107	4.3%	
Namibia	1	8	144	145	145	170	163	163	0.0%	45.7%
Niger	6	6	14	15	15	50	83	83	0.0%	20.1%
Nigeria	0	11	37	53	73	102	143	144	0.7%	55.4%
Rwanda	0	11	22	24	25	26	28	28	0.0%	39.9%
Senegal	7	8	160	161	228	231	231	273	18.0%	29.9%
Sierra Leone	0	0	5	7	15	20	20	20	0.0%	46.9%
Somalia	0	0	2	11	19	42	46	46	0.0%	73.8%
South Africa	2	1,253	4,408	5,494	5,816	5,826	5,665	6,171	8.9%	77.7%
South Sudan		0	2	3	3	3	16	30	85.0%	
Sudan	2	20	80	117	136	190	190	190	0.0%	37.2%
Tanzania	0	13	16	17	19	20	20	20	0.0%	61.5%
Tunisia	2	28	80	95	95	197	506	773	52.8%	54.1%
Uganda	0	5	68	78	80	85	85	85	0.0%	73.4%
Zambia		1	95	96	97	98	134	196	46.3%	
Zimbabwe	0	2	12	14	33	46	46	70	52.0%	111.2%
Others Africa	104	249	472	552	760	854	1,042	1,153	10.7%	18.7%

^(*) Data source: Eni's calculations on IRENA (2025), *Renewable capacity statistics 2025*, International Renewable Energy Agency, Abu Dhabi, data.

Solar Photovoltaic Power Capacity

Countries^(*)

(MW)

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Asia - Pacific	6,635	95,141	345,775	430,652	511,840	628,948	872,835	1,191,547	36.5%	44.9%
Afghanistan	0	19	52	52	52	53	53	53	0.0%	56.4%
Australia	1,088	5,032	15,450	19,769	24,393	28,884	33,279	38,469	15.6%	29.0%
Bangladesh	32	196	280	343	506	523	746	846	13.4%	26.3%
Brunei	1	1	1	1	5	5	5	5	2.9%	11.0%
China	1,022	43,538	204,575	253,414	306,403	392,462	609,351	887,360	45.6%	62.1%
East Timor	0	1	1	0	0	0	0	0	0.0%	7.9%
Hong Kong			89	91	95	185	333	333	0.0%	
India	69	5,368	34,908	39,363	49,607	63,048	72,517	97,042	33.8%	67.9%
Indonesia	15	79	158	166	221	306	630	815	29.4%	33.3%
Japan	3,618	34,150	63,192	71,868	78,413	85,066	89,077	91,610	2.8%	26.0%
Malaysia	1	222	829	1,483	1,787	2,131	2,146	2,306	7.5%	81.6%
Mongolia	12	14	98	103	103	103	108	143	32.1%	19.7%
Myanmar	0	21	88	84	110	181	181	216	19.3%	56.7%
Nepal	4	13	55	64	90	111	117	175	50.2%	30.3%
New Zealand	3	37	115	145	192	260	363	570	57.0%	45.5%
North Korea	1	23	65	79	102	116	129	143	10.5%	43.0%
Pakistan	9	265	756	855	1,078	1,244	1,243	1,395	12.3%	43.1%
Papua New Guinea	0	1	2	2	4	4	4	5	25.7%	21.0%
Philippines	1	182	1,009	1,089	1,413	1,667	1,802	2,971	64.8%	76.8%
Singapore	3	46	272	331	482	628	919	1,157	26.0%	52.7%
South Korea	651	3,467	10,847	14,756	17,905	20,525	23,493	26,645	13.4%	30.4%
Sri Lanka	7	37	350	436	624	800	958	1,450	51.4%	46.5%
Taiwan	35	884	4,150	5,817	7,700	9,724	12,418	14,281	15.0%	53.8%
Thailand	49	1,420	2,983	2,980	3,061	3,181	3,295	3,379	2.6%	35.4%
Vietnam	5	5	4,994	16,661	16,661	16,698	18,588	18,667	0.4%	81.3%
Others Asia - Pacific	10	119	457	698	831	1,044	1,079	1,508	39.8%	42.8%

^(*) Data source: Eni's calculations on IRENA (2025), *Renewable capacity statistics 2025*, International Renewable Energy Agency, Abu Dhabi, data.

Solar Photovoltaic Power Capacity

Countries^(*)

(MW)

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Americas	3,265	27,573	81,251	102,461	132,859	166,276	209,204	267,788	28.0%	37.0%
Argentina	4	14	446	768	1,077	1,113	1,405	1,741	23.9%	53.3%
Barbados	1	3	33	49	64	69	69	69	0.0%	35.4%
Belize	0	1	7	7	7	7	7	7	0.0%	58.5%
Bolivia	0	6	71	121	171	172	173	177	2.2%	137.1%
Brazil	3	49	4,706	8,482	14,511	25,399	37,940	53,113	40.0%	103.3%
Canada	216	2,877	4,007	4,379	5,261	5,439	5,884	6,105	3.8%	27.0%
Chile	0	576	2,720	3,288	4,604	6,793	8,777	10,940	24.6%	202.9%
Colombia	1	1	23	83	181	480	716	1,392	94.5%	64.8%
Costa Rica	0	9	47	56	73	73	73	73	0.0%	111.7%
Cuba		18	152	214	246	267	280	292	4.3%	
Curaçao	0	10	12	13	13	13	13	14	7.5%	57.4%
Dominican Republic		24	335	386	584	735	1,077	1,423	32.1%	
Ecuador	0	26	28	28	28	29	31	32	0.2%	69.2%
El Salvador	0	11	410	479	543	571	647	648	0.2%	98.5%
Guatemala		85	93	94	94	97	102	102	0.0%	
Guyana	0	2	7	7	7	13	17	17	1.3%	30.5%
Haiti	1	2	3	3	3	3	4	4	0.0%	14.9%
Honduras	4	396	518	525	529	529	529	554	4.7%	42.9%
Jamaica	1	7	107	107	108	110	113	117	3.1%	40.5%
Mexico	30	295	6,230	7,141	8,910	9,339	10,893	11,975	9.9%	53.5%
Nicaragua		1	16	16	16	17	18	36	94.7%	
Panama		43	225	235	498	529	646	743	15.0%	
Paraguay	0	0	0	0	0	1	1	1	0.0%	65.6%
Peru	13	135	335	335	332	332	447	528	18.0%	30.6%
Suriname		5	6	6	7	7	8	10	18.5%	
Trinidad and Tobago	3	4	4	4	4	4	4	5	12.6%	3.6%
United States	2,909	22,479	59,829	74,693	93,911	112,881	137,725	175,990	27.8%	34.1%
Uruguay	0	64	254	258	266	280	301	330	9.7%	73.9%
Venezuela	2	3	3	3	3	3	3	4	41.5%	5.7%
Others Americas	77	428	624	683	809	971	1,299	1,346	3.6%	22.6%

^(*) Data source: Eni's calculations on IRENA (2025), *Renewable capacity statistics 2025*, International Renewable Energy Agency, Abu Dhabi, data.

Wind Power Capacity

Areas and Aggregates^(*)

(MW)

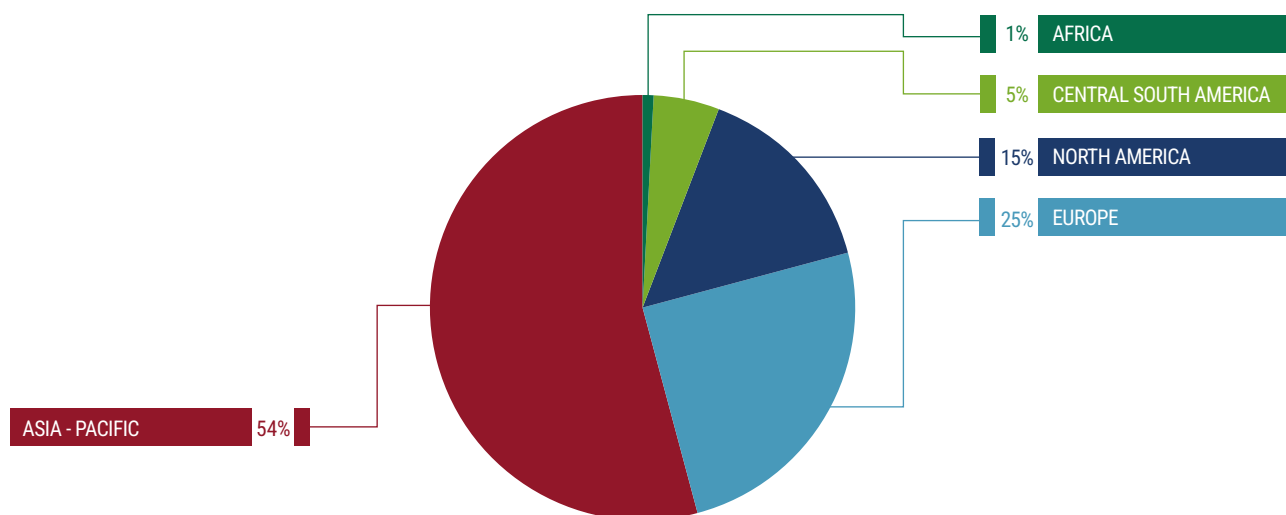
	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Europe	86,231	147,517	203,701	216,729	232,112	251,728	269,045	281,864	4.8%	8.8%
Russia and Central Asia	15	186	593	1,638	2,845	3,498	4,085	4,587	12.3%	50.8%
Middle East	104	286	785	934	1,039	1,582	1,910	1,921	0.6%	23.2%
Africa	865	3,320	5,528	6,514	6,909	7,745	8,654	9,233	6.7%	18.4%
Asia - Pacific	48,523	166,799	266,011	342,406	395,641	438,408	521,200	609,159	16.9%	19.8%
Americas	45,317	98,471	146,341	165,580	185,855	200,231	214,730	226,093	5.3%	12.2%
- North America	43,317	83,981	117,056	132,196	146,741	156,755	165,009	171,529	4.0%	10.3%
- Central South America	2,001	14,490	29,285	33,384	39,113	43,476	49,721	54,565	9.7%	26.6%
World	181,055	416,579	622,959	733,801	824,401	903,192	1,019,624	1,132,858	11.1%	14.0%
European Union 27	115,622	127,177	167,143	177,074	187,936	203,621	218,860	231,271	5.7%	5.1%
MENA	1,760	2,088	3,397	4,004	4,405	5,038	5,913	6,503	10.0%	9.8%
OECD	134,306	239,640	336,841	368,624	399,853	432,328	460,182	484,368	5.3%	9.6%
NON OECD	46,750	176,939	286,118	365,176	424,548	470,864	559,442	648,489	15.9%	20.7%
OPEC	213	218	381	384	386	818	940	951	1.2%	11.3%
NON OPEC	180,842	416,361	622,578	733,417	824,015	902,374	1,018,684	1,131,907	11.1%	14.0%

^(*) Data source: Eni's calculations on IRENA (2025), *Renewable capacity statistics 2025*, International Renewable Energy Agency, Abu Dhabi, data.

Wind Power Capacity

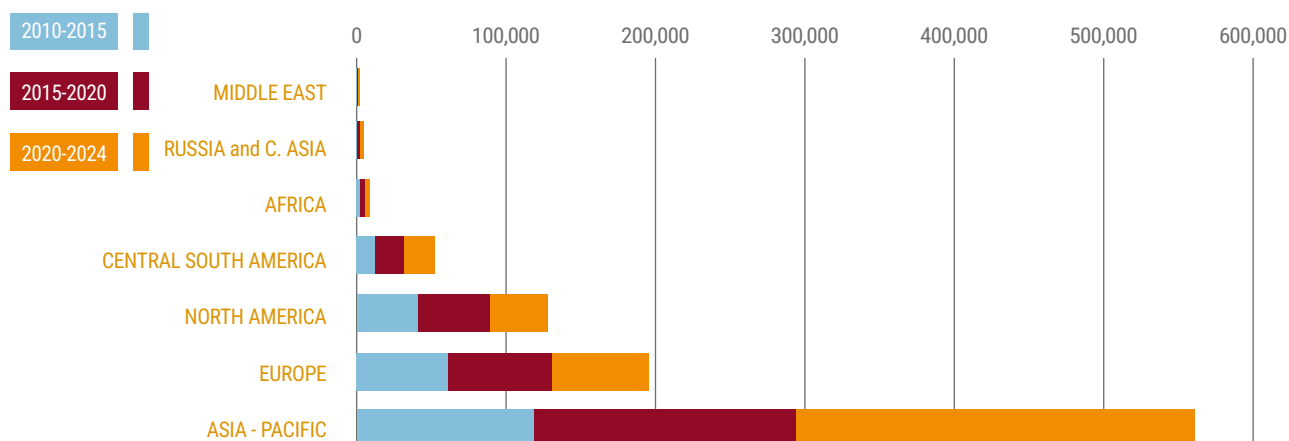
World Wind Power Capacity (2024)

1,132,858 MW



World Wind Power Capacity Growth (2010-2024)

951,802 MW



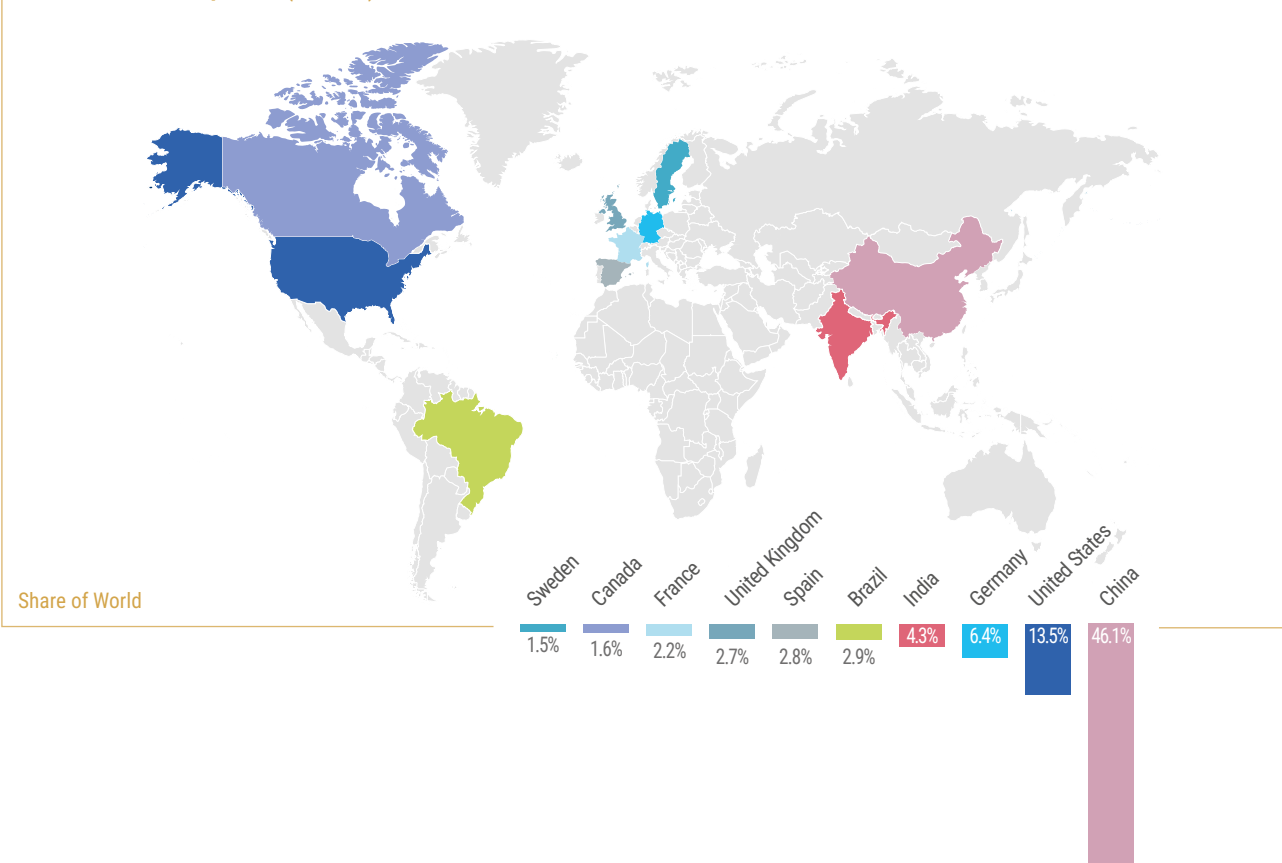
Wind Power Capacity

The World Top 10^(*)

(MW)

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
China	29,633	131,048	209,582	281,993	328,973	365,964	441,895	521,746	18.1%	22.7%
United States	39,350	72,767	103,836	118,664	133,019	141,674	148,020	153,152	3.5%	10.2%
Germany	26,903	44,580	60,742	62,201	63,711	66,202	69,486	72,823	4.8%	7.4%
India	13,184	25,088	37,505	38,559	40,067	41,930	44,736	48,163	7.7%	9.7%
Brazil	931	7,682	15,457	17,217	21,002	24,196	29,113	32,959	13.2%	29.0%
Spain	20,693	22,943	25,590	26,819	27,908	30,114	30,868	31,811	3.1%	3.1%
United Kingdom	5,421	14,305	23,887	24,458	25,748	28,761	30,163	30,902	2.5%	13.2%
France	5,912	10,298	16,427	17,535	18,551	20,835	23,132	24,592	6.3%	10.7%
Canada	3,967	11,214	13,220	13,532	13,722	15,081	16,989	18,376	8.2%	11.6%
Sweden	2,017	5,819	8,681	9,976	12,116	14,279	16,224	17,239	6.3%	16.6%
The World Top 10	148,011	345,745	514,926	610,953	684,818	749,036	850,626	951,764	11.9%	14.2%
Rest of the World	33,045	70,835	108,033	122,848	139,583	154,156	168,997	181,094	7.2%	12.9%
World	181,055	416,579	622,959	733,801	824,401	903,192	1,019,624	1,132,858	11.1%	14.0%

The World Top 10 (2024)



^(*) Data source: Eni's calculations on IRENA (2025), *Renewable capacity statistics 2025*, International Renewable Energy Agency, Abu Dhabi, data.

Wind Power Capacity

Countries^(*)

(MW)

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Europe	86,231	147,517	203,701	216,729	232,112	251,728	269,045	281,864	4.8%	8.8%
Austria	1,016	2,489	3,224	3,226	3,422	3,633	3,896	4,035	3.6%	10.4%
Belarus	2	22	112	112	112	120	122	122	0.0%	34.6%
Belgium	903	2,181	3,864	4,673	4,948	5,303	5,454	5,599	2.7%	13.9%
Bosnia Herzegovina		0	87	87	135	135	135	219	62.2%	
Bulgaria	488	699	703	703	704	704	704	704	0.0%	2.7%
Croatia	79	418	646	801	987	987	1,160	1,191	2.7%	21.4%
Cyprus	82	158	158	158	158	158	158	158	0.0%	4.8%
Czech Republic	213	281	339	339	339	339	343	356	3.9%	3.7%
Denmark	3,802	5,077	6,111	6,259	7,004	7,084	7,277	7,621	4.7%	5.1%
Estonia	108	300	316	317	316	316	337	572	69.7%	12.6%
Finland	197	1,005	2,284	2,586	3,257	5,677	6,946	8,360	20.4%	30.7%
France	5,912	10,298	16,427	17,535	18,551	20,835	23,132	24,592	6.3%	10.7%
Germany	26,903	44,580	60,742	62,201	63,711	66,202	69,486	72,823	4.8%	7.4%
Greece	1,298	2,091	3,589	4,119	4,649	4,702	5,232	5,357	2.4%	10.7%
Hungary	293	329	323	323	324	324	324	324	0.0%	0.7%
Iceland		3	2	2	2	2	4	4	0.0%	
Ireland	1,390	2,451	4,126	4,307	4,339	4,536	4,739	4,942	4.3%	9.5%
Italy	5,794	9,137	10,679	10,871	11,254	11,821	12,307	12,992	5.6%	5.9%
Kosovo	1	1	34	34	34	68	137	137	0.0%	42.1%
Latvia	30	68	78	78	77	82	128	128	0.0%	10.9%
Lithuania	133	436	534	540	671	946	1,284	1,828	42.4%	20.6%
Luxembourg	44	64	136	153	136	165	207	210	1.4%	11.9%
Malta		0	0	0	0	0	0	0	0.0%	
Moldova		1	35	41	67	115	141	123	-13.3%	
Montenegro			118	118	118	118	118	118	0.0%	
Netherlands	2,237	3,391	4,484	6,648	7,646	8,700	10,734	11,679	8.8%	12.5%
North Macedonia		37	37	37	37	37	74	74	0.0%	
Norway	425	867	2,914	4,030	5,049	5,062	5,064	5,152	1.7%	19.5%
Poland	1,108	4,886	5,838	6,298	6,967	8,150	9,343	10,059	7.7%	17.1%
Portugal	3,796	4,937	5,223	5,122	5,427	5,538	5,538	5,583	0.8%	2.8%
Romania	389	3,130	3,038	3,013	3,015	3,015	3,027	3,096	2.3%	16.0%
Serbia		10	398	398	398	398	510	604	18.4%	
Slovakia	3	3	4	4	4	4	4	4	0.0%	2.1%
Slovenia		3	3	3	3	3	3	3	0.0%	
Spain	20,693	22,943	25,590	26,819	27,908	30,114	30,868	31,811	3.1%	3.1%
Sweden	2,017	5,819	8,681	9,976	12,116	14,279	16,224	17,239	6.3%	16.6%
Switzerland	42	60	75	87	88	88	88	102	15.7%	6.5%
Türkiye	1,320	4,503	7,591	8,832	10,607	11,396	11,806	12,973	9.9%	17.7%
Ukraine	88	514	1,258	1,402	1,761	1,761	1,761			
United Kingdom	5,421	14,305	23,887	24,458	25,748	28,761	30,163	30,902	2.5%	13.2%
Others Europe	4	20	13	19	23	48	66	68	3.0%	22.2%

^(*) Data source: Eni's calculations on IRENA (2025), *Renewable capacity statistics 2025*, International Renewable Energy Agency, Abu Dhabi, data.

Wind Power Capacity

Countries^(*)

(MW)

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Russia and Central Asia	15	186	593	1,638	2,845	3,498	4,085	4,587	12.3%	50.8%
Russia	10	103	197	1,041	2,050	2,280	2,532	2,567	1.4%	48.6%
Armenia	3	3	3	3	3	3	3	3	0.0%	0.7%
Azerbaijan	2	8	66	66	66	64	67	64	-4.2%	28.0%
Georgia			21	21	21	21	21	21	0.0%	
Kazakhstan		72	284	486	684	1,108	1,440	1,411	-2.0%	
Uzbekistan			1	1	1	1	1	501		
Others Central Asia			21	21	21	21	21	21	0.0%	

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Middle East	104	286	785	934	1,039	1,582	1,910	1,921	0.6%	23.2%
Bahrain	1	1	1	1	1	3	3	3	0.0%	10.3%
Iran	95	153	305	308	310	342	365	376	3.1%	10.3%
Israel	6	6	27	27	27	136	343	343	0.0%	33.5%
Jordan	1	118	384	529	632	632	631	631	0.0%	54.7%
Kuwait		2	12	12	12	12	12	12	0.0%	
Lebanon		3	3	3	3	3	3	3	0.0%	
Oman			50	50	50	50	50	50	0.0%	
Saudi Arabia			3	3	3	403	403	403	0.0%	
Syria	1	1	1	1	1	1	1	1	0.0%	0.0%
Others Middle East		2			0	0	99	99	0.0%	

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Africa	865	3,320	5,528	6,514	6,909	7,745	8,654	9,233	6.7%	18.4%
Algeria		10	10	10	10	10	10	10	0.0%	
Chad			1	1	1	1	1	1	0.0%	
Egypt	555	755	1,132	1,380	1,640	1,643	1,890	2,199	16.3%	10.3%
Ethiopia		324	324	324	324	404	324	324	0.0%	
Ghana		0	0	0	0	0	0	0	0.0%	
Kenya	6	26	336	336	436	436	436	436	0.0%	36.4%
Madagascar	0	0	0	0	0	0	0	0	0.0%	0.2%
Mauritania		34	34	34	34	34	137	137	0.0%	
Morocco	221	797	1,225	1,435	1,471	1,558	1,858	2,128	14.5%	17.6%
Namibia	0	0	5	5	5	5	5	5	0.0%	25.4%
Senegal			55	159	159	159	159	159	0.2%	
Somalia		3	4	4	4	4	4	4	0.0%	
South Africa	10	1,079	2,094	2,516	2,495	3,163	3,442	3,442	0.0%	51.6%
Tanzania				2	2	2	2	2	0.0%	
Tunisia	54	240	245	245	245	245	245	245	0.0%	11.5%
Others Africa	19	51	62	62	82	81	141	141	0.0%	15.4%

^(*) Data source: Eni's calculations on IRENA (2025), *Renewable capacity statistics 2025*, International Renewable Energy Agency, Abu Dhabi, data.

Wind Power Capacity

Countries^(*)

(MW)

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Asia - Pacific	48,523	166,799	266,011	342,406	395,641	438,408	521,200	609,159	16.9%	19.8%
Afghanistan		0	0	0	0	0	0	0	0.0%	
Australia	1,864	4,318	7,881	10,207	10,555	11,966	12,908	15,288	18.4%	16.2%
Bangladesh	2	3	3	3	3	3	3	3	0.0%	3.1%
China	29,633	131,048	209,582	281,993	328,973	365,964	441,895	521,746	18.1%	22.7%
Hong Kong			1	1	1	1	1	1	0.0%	
India	13,184	25,088	37,505	38,559	40,067	41,930	44,736	48,163	7.7%	9.7%
Indonesia	0	1	154	154	154	154	152	152	0.0%	54.7%
Japan	2,294	2,809	3,952	4,120	4,262	4,483	5,343	5,832	9.2%	6.9%
Mongolia	1	51	156	156	156	156	155	156	0.9%	47.5%
Myanmar		0	0	0	0	0	0	0	0.0%	
Nepal		0	0	0	0	0	0	0	0.0%	
New Zealand	540	689	690	690	913	994	1,059	1,263	19.3%	6.3%
North Korea	0	1	1	2	2	2	2	2	0.0%	14.5%
Pakistan	6	308	1,236	1,236	1,335	1,845	1,845	1,845	0.0%	50.6%
Philippines	33	427	443	443	443	443	443	443	0.0%	20.4%
Singapore			0	0	0	0	0	0	0.0%	
South Korea	367	853	1,494	1,645	1,709	1,946	2,205	2,301	4.4%	14.0%
Sri Lanka	34	131	128	179	252	252	267	267	0.0%	15.9%
Taiwan	476	647	845	937	1,094	1,581	2,677	3,890	45.3%	16.2%
Thailand	6	234	1,507	1,507	1,545	1,545	1,544	1,544	0.0%	49.4%
Vietnam	31	136	375	518	4,118	5,065	5,888	6,185	5.0%	46.0%
Others Asia - Pacific	52	54	57	57	57	77	77	77	0.0%	2.8%

^(*) Data source: Eni's calculations on IRENA (2025), *Renewable capacity statistics 2025*, International Renewable Energy Agency, Abu Dhabi, data.

Wind Power Capacity

Countries^(*)

(MW)

	2010	2015	2019	2020	2021	2022	2023	2024	Δ y/y (2024-2023)	CAGR (2024-2010)
Americas	45,317	98,471	146,341	165,580	185,855	200,231	214,730	226,093	5.3%	12.2%
Argentina	1	188	1,609	2,624	3,292	3,310	3,706	4,320	16.6%	80.2%
Barbados	0	0	0	0	0	1	1	1	0.0%	27.2%
Belize	0	0	0	0	0	0	0	0	0.0%	0.0%
Bolivia		3	27	27	128	128	135	135	0.0%	
Brazil	931	7,682	15,457	17,217	21,002	24,196	29,113	32,959	13.2%	29.0%
Canada	3,967	11,214	13,220	13,532	13,722	15,081	16,989	18,376	8.2%	11.6%
Chile	163	910	1,705	2,526	3,203	3,926	4,623	4,807	4.0%	27.3%
Colombia	18	18	18	18	18	34	34	34	0.0%	4.6%
Costa Rica	120	278	411	394	390	390	408	402	-1.3%	9.1%
Cuba	16	16	16	16	16	16	16	16	2.8%	0.4%
Curaçao	12	30	47	47	47	47	47	70	47.6%	13.4%
Dominican Republic		86	370	370	370	417	417	433	3.7%	
Ecuador	2	21	21	21	21	21	71	71	0.0%	27.4%
El Salvador				36	54	54	54	54	0.0%	
Guatemala		76	107	107	107	107	107	107	0.0%	
Guyana	0	0	0	0	0	0	0	0	0.0%	10.4%
Haiti			0	0	0	0	0	0	0.0%	
Honduras		156	239	239	239	239	239	239	0.0%	
Jamaica	42	42	102	102	102	102	102	102	0.0%	6.6%
Mexico	519	3,271	6,541	6,995	7,469	7,634	7,318	7,318	0.0%	20.8%
Nicaragua	63	186	186	186	186	186	186	186	0.0%	8.0%
Panama		205	270	270	270	336	336	336	0.0%	
Peru	1	240	372	409	409	539	1,015	1,151	13.4%	69.7%
Trinidad and Tobago		0	0	0	0	0	0	0	0.0%	
United States	39,350	72,767	103,836	118,664	133,019	141,674	148,020	153,152	3.5%	10.2%
Uruguay	41	857	1,524	1,524	1,524	1,524	1,524	1,524	0.0%	29.6%
Venezuela		50	50	50	50	50	50	50	0.0%	
Others Americas	73	175	210	205	214	218	219	248	13.6%	9.1%

^(*) Data source: Eni's calculations on IRENA (2025), *Renewable capacity statistics 2025*, International Renewable Energy Agency, Abu Dhabi, data.