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RENEWABLE ENERGY vs. NUCLEAR POWER

A Comparison of Generating Capacity & Electrical Generation: Historic Trends and Near-Term Forecasts Based on EIA and FERC Data

(February 19, 2026)

Summary:

A review of the most recent data published by the Federal Energy Regulatory Commission (FERC) and the U.S. Energy Information Administration (EIA) confirms that renewable energy sources (i.e., solar, wind, hydropower, biomass, geothermal) are comfortably and increasingly surpassing nuclear power in both generating capacity and actual electrical generation … and near-term forecasts are for the gap to widen further.

Key findings include:

**The mix of utility-scale renewables plus small-scale solar provided nearly 50% more electricity than did nuclear power in the first 11 months of 2025. The combination of just wind plus utility-scale and small-scale (i.e., < 1-MW) solar generated 10% more electricity than did nuclear power.

**Compared to the same 11-month period in 2024, electrical generation by renewables in 2025 grew at a far faster rate than did nuclear power: 8.7% vs. 0.2%.

**Over the past decade, nuclear power's share of U.S. electrical generation has declined from 19.44% at the end of 2015 to 17.23% today while renewables' share has nearly doubled from 13.70% to 25.74%.

**Ten years ago, nuclear power's share of total installed generating capacity was 9.16%; now it is 7.41%. Meanwhile, installed renewable energy capacity has more than doubled and renewables' share of total installed capacity has risen from 17.67% in 2015 to 34.22% today.

**New utility-scale solar generating capacity placed into service during the first 11 months of 2025 was 72.14% of the total; wind provided another 15.76% while there was no new nuclear capacity.

**The total available installed U.S. generating capacity of utility-scale solar and wind now each significantly exceed that of nuclear power while that of hydropower is close behind that of nuclear.

**The combined generating capacity of all renewables is now more than four times greater than that of nuclear power.

**Within the next three years, installed renewable energy capacity (and its corresponding share of total installed generating capacity) should be over five times more than that of nuclear power.

Notes and Methodology:

Nine tables are provided at the end of this report.

The first five tables provide EIA and FERC data for electrical generation and generating capacity for nuclear power and renewable energy sources for the years 2010, 2015, 2020, 2024, and 2025 (through November 30). EIA electrical generation data are presented in gigawatt-hours (GWh); EIA capacity data are "summer capacity" and are presented in megawatts (MW) while FERC data are presented in gigawatts (GW).

There are differences in the capacity data provided by EIA and FERC. Therefore, when comparisons are made in this report between nuclear power and renewable energy capacities, the EIA data is generally used, unless otherwise indicated.

The last four tables provide EIA and FERC forecasts for growth in electrical generation and/or installed capacity for nuclear power and renewable energy sources over the next 1-3 years.

The sources for the data presented in each table are provided at the end of the table.

Several abbreviations are used in the tables. These include:
Total-Elec.: total electrical generation or capacity
Solar-U: utility-scale solar (>1-MW)
Solar-S: small-scale solar (<1-MW) [usually "estimated"]
S-Subt: utility-scale + small-scale solar
W-Subt.: on-shore + offshore wind
S+W-Subt.: solar + wind
RE-Subt.: all renewables

Capacity Factors: When looking at electrical generation by different energy sources, side-by-side comparisons are reasonable. However, when comparing the installed capacities of different energy sources, remember that the capacity factor for nuclear power is generally higher than that of each form of renewable energy. According to the most recent issue of EIA's "Electric Power Monthly" report (released January 26, 2026), in 2024 (the most recent year for which there is complete data), capacity factors for utility-scale sources were:

Nuclear	90.8%
Solar-PV*	23.2

Solar-Thermal	25.0
Wind	34.3
Hydropower	34.6
Wood	55.8
Other Biomass	59.5
Geothermal	64.6

(see: https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=table_6_07_b)
*Capacity factors for small-scale solar systems are usually lower – i.e., 10%-25%.

Generating Capacity:

According to EIA, as of November 30, 2025, the total available installed U.S. generating capacity of utility-scale (i.e., >1-MW) solar (145,689.3-MW) and wind (156,331.5-MW) each exceeded that of nuclear power (98,437.2-MW). Including hydropower, biomass, geothermal, and small-scale solar, the combined generating capacity of all renewables (454,622.8-MW) was over four times more than that of nuclear power.

For the eleven-month period January 1 - November 30, 2025, new utility-scale solar generating capacity placed into service totaled 22,237.2-MW. New small-scale capacity totaled 5,460.5-MW. New wind capacity totaled 4,234.2-MW. New battery storage totaled 13,357.0-MW. By comparison, new nuclear capacity added during the same period was 0.00-MW.

According to EIA, over the past decade (i.e., January 1, 2016 – November 30, 2025), utility-scale solar has added 132,282.9-MW of new generating capacity. Small-scale solar has grown by 50,309.5-MW. Wind has grown by 83,753.6-MW. All renewables combined have grown by 264,223.1-MW. Battery storage capacity has increased by 40,131.3-MW. By comparison, nuclear power's installed capacity has decreased by 291.8-MW.

During this same ten-year period, utility-scale solar's share of total installed generating capacity has increased from 1.24% to 10.97%. Small-scale solar's share has increased from 0.78% to 4.42%. Wind's share has increased from 6.73% to 11.77%. All renewables combined have increased their share from 17.67% to 34.22%. By comparison, nuclear power's share has dropped from 9.16% to 7.41%.

Electrical Generation:

According to EIA, during the first eleven months of 2025, the mix of utility-scale solar and wind plus small-scale solar provided 783,935-GWh or over 10% more electricity than did nuclear power (712,260-GWh). Including hydropower, biomass, and geothermal, electrical generation by the mix of all renewables (1,063,510-GWh) surpassed nuclear power by nearly 50% (49.31%).

During this period, the share of U.S. electricity provided by utility-scale and small-scale solar plus wind was 18.96%. The share provided by all renewables combined was 25.73%. The share provided by nuclear power was 17.23%.

Between January 1, 2016 and November 30, 2025, utility-scale solar has increased its share of total U.S. electrical generation from 0.64% to 6.74% while the share provided by small-scale solar has grown from 0.30% to 2.13%. Wind has expanded its share from 4.66% to 10.10%. The share provided by the mix of all renewables has increased from 13.70% to 25.73%. Meanwhile, nuclear power's share of total generation has dropped from 19.44% to 17.23%.

Forecasts:

According to its latest "Electric Power Monthly" report, EIA projects domestic utility-scale solar to add 37,156.6-MW of capacity between now and November 30, 2026, which would bring total capacity to 182,845.9-MW (plus the capacity of small-scale solar which was 58,688.6-MW at the end of November 2025 and likely to add an additional 6,000-MW by the end of November 2026).

During the same period, wind is forecast to add 9,256.2-MW of on-shore capacity and an additional 1,515.0-MW of offshore capacity, bringing total installed wind capacity to 167,102.7-MW.

In addition, EIA expects 21,502.2-MW in new battery storage capacity to be added, which would bring the total up to 61,839.2-MW.

Meanwhile, EIA anticipates no new nuclear capacity before November 30, 2026. That would leave nuclear capacity at 98,437.2-MW.

In its latest "Short-Term Energy Outlook" report, EIA projects utility-scale solar capacity to increase from 141-GW in 2025 to 172-GW in 2026 and then to 209-GW in 2027. EIA further expects a 17% increase in solar generation in 2026 and an additional 23% increase in 2027. Over the two-year period, annual solar electrical generation would increase from 0.291 to 0.418 billion kilowatt-hours.

Meanwhile, wind capacity is projected to grow from 159-GW in 2025 to 171-GW in 2026 and then to 178-GW in 2027. EIA expects wind generation to increase by 6% and 7%, respectively in 2026 and 2027. Over the two-year period, annual wind electrical generation would increase from 0.460 to 0.518 billion kilowatt-hours.

Thus, between the beginning of 2026 and the end of 2027, electrical generation by utility-scale solar and wind combined would increase from 0.751 to 0.936 billion kilowatt-hours and account for 21.10% of total electrical generation – up from 17.6% at the end of 2025.

On the other hand, nuclear power is projected to decline from an 18.81% share of U.S. electricity generation in 2024 to 18.37% in 2025, increase slightly to 18.46% in 2026 and then fall again to 18.01%

in 2027. That is, annual electrical generation by nuclear power would increase from 0.784 to just 0.799 billion kilowatt-hours between January 1, 2026 and December 31, 2027.

Finally, in its latest monthly "Energy Infrastructure Update" report, over the next three years (i.e., December 2025 – November 2028), FERC foresees 86,130-MW of net new capacity additions by utility-scale solar as well as 19,821-MW from wind. Meanwhile, new nuclear power capacity additions would total only 335-MW.

This will further dwarf nuclear power's share of total installed U.S. generating capacity. At the end of November 2028, installed renewable energy capacity would reach 38.09% of the total: solar (17.24%), wind (12.49%), hydropower (7.09%), biomass (0.97%), and geothermal (0.30%). However, nuclear's share would decline from 7.72% in November 2025 to 7.24% in November 2028.

Thus, in three years, the share of installed utility-scale generating capacity provided by solar plus wind would be 29.73% - more than four times nuclear power's share. Including hydropower, biomass, and geothermal, renewable energy' share would be more than five times that of nuclear power.

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Table 1. EIA Generation and EIA & FERC Capacity Data

January 1 - November 30, 2025

	Generation	%	Capacity-EIA	%	Capacity-FERC	%
Total Elec.	4,133,852	100.00	1,328,413.6	100.00	1,351.75	100.00
Nuclear	712,260	17.23	98,437.2	7.41	104.39	7.72
Solar-U	278,649	6.74	145,689.3	10.97	163.44	12.09
Solar-S	87,875	2.13	58,688.6	4.42	N/A	N/A
Solar-Subt.	366,523	8.87	204,377.9	15.39	163.44	12.09
Wind	417,412	10.10	156,331.5	11.77	160.90	11.90
S+W-Subt.	783,935	18.96	360,709.4	27.15	324.34	23.95
Hydro	223,035	5.40	79,906.8	6.02	102.09	7.55
Biomass	42,226	1.02	11,311.1	0.85	14.19	1.05
Geotherm.	14,313	0.34	2,695.5	0.20	4.20	0.31
RE-Subt.	1,063,510	25.73	454,622.8	34.22	444.82	32.90
Batteries			40,377.0			

Sources:
U.S. Energy Administration, "Electric Power Monthly" (January 26, 2026), Tables ES1.B and 6.1
https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=table_es1b
https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=table_6_01

Federal Energy Regulatory Commission, "Energy Infrastructure Update for November 2025" (January 29, 2026)
https://cms.ferc.gov/media/energy-infrastructure-update-november-2025

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Table 2. EIA Generation and EIA & FERC Capacity Data

January 1 - December 31, 2024

	Generation	%	Capacity-EIA	%	Capacity-FERC	%
Total Elec.	4,388,669	100.00	1,283,155.1	100.00	1,315.63	100.00
Nuclear	781,979	17.82	96,771.1	7.54	103.15	7.84
Solar-U	218,538	4.98	122,568.1	9.55	134.12	10.19
Solar-S	84,630	1.93	53,342.4	4.16	N/A	N/A
Solar-Subt.	303,168	6.91	175,910.5	13.71	134.12	10.19
Wind	453,454	10.33	152,710.9	11.90	153.65	11.68
S+W-Subt.	756,622	17.24	328,621.4	25.61	287.77	21.87
Hydro	242,226	5.52	79,829.3	6.22	100.89	7.67
Biomass	46,741	1.07	11,636.5	0.91	14.49	1.10
Geotherm.	15,671	0.36	2,733.7	0.21	4.17	0.32
RE-Subt.	1,061,260	24.18	422,820.9	32.95	407.32	30.96
Batteries			26,075.8			

Sources:
U.S. Energy Administration, "Electric Power Monthly" (February 26, 2025), Tables ES1.B and 6.1
https://www.eia.gov/electricity/monthly/archive/february2025.pdf

Federal Energy Regulatory Commission, "Energy Infrastructure Update for December 2024" (February 6, 2025)
https://cms.ferc.gov/media/energy-infrastructure-update-december-2024

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Table 3. EIA Generation and EIA & FERC Capacity Data

January 1 - December 31, 2020

	Generation	%	Capacity-EIA	%	Capacity-FERC	%
Total Elec.	4,050,825	100.00	1,145,198.4	100.00	1,217.21	100.00
Nuclear	789,919	19.50	96,554.8	8.43	104.32	8.57
Solar-U	90,891	2.24	47,848.2	4.18	52.58	4.32
Solar-S	41,740	1.03	27,723.6	2.42	N/A	N/A
Solar-Subt.	132,631	3.27	75,571.8	6.60	52.58	4.32
Wind	337,510	8.33	117,571.8	10.28	119.67	9.83
S+W-Subt.	470,141	11.61	193,315.9	16.88	172.25	14.15
Hydro	291,111	7.19	79,946.4	6.98	101.04	8.30
Biomass	56,054	1.38	13,035.9	1.14	15.64	1.29
Geotherm.	16,930	0.42	2,587.2	0.23	3.90	0.32
RE-Subt.	834,236	20.59	288,885.4	25.23	292.83	24.06
Batteries			1,642.6			

Sources:
U.S. Energy Administration, "Electric Power Monthly" (February 9, 2021), Tables ES1.B and 6.1
https://www.eia.gov/electricity/monthly/archive/february2021.pdf

Federal Energy Regulatory Commission, "Energy Infrastructure Update for December 2020" (February 8, 2021)
https://cms.ferc.gov/media/energy-infrastructure-update-december-2020

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Table 4. EIA Generation and EIA & FERC Capacity Data
January 1 - December 31, 2015

	Generation	%	Capacity-EIA	%	Capacity-FERC	%
Total Elec.	4,099,522	100.00	1,077,711.3	100.00	1,168.78	100.00
Nuclear	797,178	19.44	98,729.0	9.16	107.03	9.16
Solar-U	26,473	0.64	13,406.4	1.24	14.70	1.26
Solar-S	12,141	0.30	8,379.1	0.78	N/A	N/A
Solar-Subt.	38,614	0.94	21,785.5	2.02	14.70	1.26
Wind	190,927	4.66	72,577.9	6.73	74.00	6.33
S+W-Subt.	229,541	5.60	94,363.4	8.76	88.70	7.59
Hydro	251,168	6.13	79,741.7	7.40	100.06	8.56
Biomass	64,191	1.57	13,764.4	1.28	16.68	1.43
Geotherm.	16,767	0.41	2,530.2	0.23	3.91	0.33
RE-Subt.	561,667	13.70	190,399.7	17.67	209.35	17.91
Batteries			245.7			

Sources:
U.S. Energy Administration, "Electric Power Monthly" (February 25, 2016), Tables ES1.B and 6.1
https://www.eia.gov/electricity/monthly/archive/february2016.pdf

Federal Energy Regulatory Commission, "Energy Infrastructure Update for December 2015" (February 2, 2016)
https://www.ferc.gov/media/2699

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Table 5. EIA Generation and EIA & FERC Capacity Data
January 1 - December 31, 2010

	Generation	%	Capacity-EIA	%	Capacity-FERC	%
Total Elec.	4,120,028	100.00	N/A	100.00	1,132.68	100.00
Nuclear	806,968	19.59	N/A	N/A	108.31	9.56
Solar-U	1,299	0.03	N/A	N/A	1.12	0.10
Solar-S	N/A	N/A	N/A	N/A	N/A	N/A
Solar-Subt.	1,299	0.03	N/A	N/A	1.12	0.10
Wind	94,647	2.30	N/A	N/A	38.50	3.40

S+W-Subt.	95,946	2.33	N/A	N/A	39.62	3.50
Hydro	257,052	6.24	N/A	N/A	99.10	8.75
Biomass	56,532	1.37	N/A	N/A	13.26	1.17
Geotherm.	15,666	0.38	N/A	N/A	3.30	0.29
RE-Subt.	425,196	10.32	N/A	N/A	155.28	13.71
Batteries			N/A			

Sources:
U.S. Energy Administration, "Electric Power Monthly" (March xx, 2011), Tables ES1.B
https://www.eia.gov/electricity/monthly/archive/march2011.pdf

Federal Energy Regulatory Commission, "Energy Infrastructure Update for December 2010" (February 4, 2011)
https://www.ferc.gov/sites/default/files/2020-05/12-10-energy-infrastructure.pdf

Note: EIA does not provide installed capacity for 2010 in the cited report.

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Table 6. EIA's 12-Month Forecast for Net Utility-Scale Capacity Additions
(December 1, 2025 – November 30, 2026)
[Megawatts (MW)]

Total Elec.	70,170.4
Nuclear	0.0
Solar-U	37,156.6
Wind-Onshore	9,256.2
Wind-Offshore	1,515.0
Wind-Subt.	10,771.2
S+W-Subt.	47,927.8
Hydro	88.4
Biomass	32.7
Geotherm.	28.0
RE-Subt.	48,076.9
Batteries	21,502.2

Source:
U.S. Energy Administration, "Electric Power Monthly" (January 26, 2026)
https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=table_6_01

Note: Data for small-scale solar is not provided.

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Table 7. EIA's Forecast Through 2027 for Utility-Scale Electricity Generation
(billion kilowatt-hours)

Year	Gas	Coal	Nuclear	Hydro	Wind	Solar	Other	Total	RE-%	Nuclear-%
2024	1.766	0.648	0.782	0.242	0.452	0.219	0.022	4.157	22.49%	18.81%

2025	1.701	0.733	0.784	0.245	0.460	0.291	0.025	4.267	23.92%	18.37%
2026	1.710	0.692	0.799	0.253	0.486	0.341	0.022	4.328	25.46%	18.46%
2027	1.727	0.668	0.799	0.261	0.518	0.418	0.022	4.437	27.47%	18.00%

Source:
U.S. Energy Administration, "Short-Term Energy Outlook" (February 10, 2026) [Figure 30]
https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.eia.gov%2Foutlooks%2Fsteo%2Fxls%2FFig30.xlsx&wdOrigin=BROWSELINK

Note: Data for small-scale solar is not provided.

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Table 8. EIA's Forecast Through 2027 for Utility-Scale Solar and Wind Capacity

(Gigawatts [GW])

	2024	2025	2026	2027
Solar-U	123	141	172	209
Wind	152	159	171	178
S+W-Subt.	275	300	343	387

Source:
U.S. Energy Administration, "Shot-Term Energy Outlook" (February 10, 2026)
https://www.eia.gov/outlooks/steo/report/elec_coal_renew.php

Note: Data for nuclear capacity is not provided.

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Table 9. FERC's 3-Year Forecast for Net "High Probability" Utility-Scale Capacity Additions

Source:	New Capacity (MW) (12/25-11/28)	Total Capacity (GW) (November 30, 2028)	% of Total Capacity (November 30, 2028)
Nuclear	335	104.73	7.24%
Wind	19,821	180.72	12.49%
Solar	86,130	249.57	17.24%
Hydropower	555	102.65	7.09%
Biomass	(116)	14.07	0.97%
Geothermal	102	4.30	0.30%
Renewables Subtotal	106,492	551.31	38.09%

Source: Federal Energy Regulatory Commission, "Energy Infrastructure Update for November 2025" (see table "Generation Capacity Additions and Retirements (December 2025 – November 2028)")