

Annual Energy Outlook 2006 with Projections to 2030

Release Date: December 2005

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Table 9. Electricity Generating Capacity (gigawatts)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Electric Power Sector 2/															
Power Only 3/															
Coal Steam	305.5	305.0	304.5	303.5	304.8	305.0	311.9	313.7	314.7	315.1	313.0	314.0	315.0	319.0	323.4
Other Fossil Steam 4/	128.8	123.8	122.3	122.2	122.2	121.8	121.8	121.8	121.8	102.8	92.8	87.3	85.9	83.5	80.9
Combined Cycle	110.4	126.3	139.3	144.7	149.0	150.6	150.6	151.5	151.5	151.8	152.9	154.6	157.0	161.7	166.9
Combustion Turbine/Diesel	125.2	127.2	132.9	134.3	135.2	135.5	135.7	136.1	136.2	133.9	131.0	133.3	136.3	138.7	141.3
Nuclear Power 5/	99.5	99.6	100.1	100.3	100.6	100.7	100.8	100.9	101.0	101.1	101.1	102.4	104.0	105.8	107.7
Pumped Storage	20.7	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Renewable Sources 6/	91.4	91.9	94.8	96.9	101.2	101.6	102.0	102.3	102.6	102.9	103.2	103.7	104.6	105.0	106.0
Distributed Generation (Natural Gas) 7/	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.8	0.9
Total	881.5	894.6	914.5	922.6	933.8	936.1	943.9	947.4	948.9	928.8	915.2	916.5	924.2	935.2	947.6
Combined Heat and Power 8/															
Coal Steam	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.3	4.3	4.3	4.3	4.3
Other Fossil Steam 4/	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Combined Cycle	31.7	32.4	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3
Combustion Turbine/Diesel	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Renewable Sources 6/	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total	40.4	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	40.5	40.5	40.5	40.5	40.5
Cumulative Planned Additions 9/															
Coal Steam	0.0	0.0	0.4	0.8	2.4	2.9	6.8	8.3	8.3	9.3	9.3	9.3	9.3	9.3	9.3
Other Fossil Steam 4/	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Combined Cycle	0.0	0.0	13.5	19.0	23.3	24.9	24.9	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7
Combustion Turbine/Diesel	0.0	0.0	2.8	4.1	4.7	4.8	5.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Nuclear Power	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumped Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Renewable Sources 6/	0.0	0.0	2.9	5.0	9.3	9.5	9.8	10.0	10.2	10.4	10.6	10.8	11.0	11.1	11.1
Distributed Generation 7/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	19.6	28.9	39.7	42.2	46.5	49.4	49.6	50.8	51.0	51.2	51.5	51.5	51.5
Cumulative Unplanned Additions 9/															
Coal Steam	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.4	4.9	4.9	4.9	6.0	7.0	11.0	15.4
Other Fossil Steam 4/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Combined Cycle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.4	3.1	5.5	10.2	15.4
Combustion Turbine/Diesel	0.0	0.0	3.5	3.8	4.1	4.3	4.5	4.7	4.8	4.8	5.8	8.7	11.6	14.0	16.6
Nuclear Power	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.2	3.6	5.4
Pumped Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Renewable Sources 6/	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.4	0.5	0.6	0.7	1.0	1.7	2.1	3.0
Distributed Generation 7/	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.8	0.9
Total	0.0	0.0	3.5	3.8	4.1	4.6	8.1	8.8	10.5	11.0	13.2	20.3	28.6	41.7	56.6
Cumulative Electric Power Sector Additions	0.0	0.0	23.2	32.6	43.8	46.8	54.6	58.2	60.2	61.8	64.2	71.5	80.1	93.2	108.1
Cumulative Retirements 10/															
Coal Steam	0.0	0.0	0.9	2.3	2.6	2.9	2.9	3.0	3.4	4.1	6.7	6.8	6.8	6.8	6.8
Other Fossil Steam 4/	0.0	0.0	1.6	1.6	1.6	2.0	2.0	2.0	2.0	21.0	31.0	36.6	37.9	40.3	42.9
Combined Cycle	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Combustion Turbine/Diesel	0.0	0.0	0.9	1.1	1.1	1.2	1.3	1.4	1.5	3.8	7.7	8.2	8.2	8.2	8.2
Nuclear Power	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumped Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Renewable Sources 6/	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total	0.0	0.0	4.1	5.6	5.9	6.7	6.9	7.1	7.6	29.5	46.1	52.2	53.6	56.0	58.6
Total Electric Power Sector Capacity	921.9	935.6	955.6	963.7	974.8	977.1	984.9	988.4	990.0	969.8	955.7	957.0	964.7	975.8	988.1
Commercial and Industrial Generators 11/															
Coal	4.2	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.7	5.2	5.7	5.9	6.2	6.4	6.8
Petroleum	0.8	1.6	1.6	1.6	1.7	1.6	1.7	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8
Natural Gas	15.7	15.8	16.1	16.3	16.6	16.9	17.3	17.7	18.0	18.4	18.7	19.1	19.6	20.1	20.6
Other Gaseous Fuels	1.8	1.8	1.8	1.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Renewable Sources 6/	5.3	5.4	5.4	5.7	5.9	6.1	6.3	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3
Other	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Total	28.5	29.3	29.8	30.3	30.6	31.1	31.7	32.4	33.4	34.6	35.3	36.2	36.9	37.8	38.8
Cumulative Capacity Additions 9/	0.0	0.0	0.5	0.9	1.2	1.7	2.4	3.1	4.1	5.2	6.0	6.8	7.6	8.5	9.5

Table 9. Electricity Generating Capacity (gigawatts)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2004-2030
Electric Power Sector 2/														
Power Only 3/														
Coal Steam	328.5	334.0	340.9	347.5	356.5	365.8	376.2	385.7	397.5	411.0	426.1	441.3	453.1	1.5%
Other Fossil Steam 4/	79.9	79.8	79.8	79.8	79.8	79.8	79.0	78.8	78.1	78.1	75.3	74.8	74.8	-1.9%
Combined Cycle	173.0	177.1	181.4	184.5	186.3	188.5	191.0	193.4	195.3	195.4	196.6	196.6	198.3	1.7%
Combustion Turbine/Diesel	142.6	144.4	146.1	147.8	149.6	151.3	153.9	155.9	158.3	160.6	163.8	166.6	170.8	1.1%
Nuclear Power 5/	108.5	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	0.3%
Pumped Storage	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	N/A
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Renewable Sources 6/	106.4	107.0	107.8	108.4	109.4	110.0	110.8	111.4	112.1	112.6	113.0	113.2	113.7	0.8%
Distributed Generation (Natural Gas) 7/	1.0	1.2	1.4	1.6	1.7	2.0	2.1	2.4	3.0	3.6	4.3	4.9	5.5	N/A
Total	960.7	972.9	986.9	999.0	1012.8	1026.8	1042.5	1057.2	1073.8	1090.7	1108.5	1127.1	1145.7	1.0%
Combined Heat and Power 8/														
Coal Steam	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	-0.4%
Other Fossil Steam 4/	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	N/A
Combined Cycle	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	0.0%
Combustion Turbine/Diesel	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	0.0%
Renewable Sources 6/	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2%
Total	40.5	0.0%												
Cumulative Planned Additions 9/														
Coal Steam	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	N/A
Other Fossil Steam 4/	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	N/A
Combined Cycle	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7	N/A
Combustion Turbine/Diesel	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	N/A
Nuclear Power	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Pumped Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Renewable Sources 6/	11.1	11.1	11.1	11.2	11.2	11.2	11.2	11.2	11.3	11.3	11.3	11.3	11.4	N/A
Distributed Generation 7/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Total	51.5	51.5	51.6	51.6	51.6	51.6	51.6	51.7	51.7	51.7	51.7	51.8	51.8	N/A
Cumulative Unplanned Additions 9/														
Coal Steam	20.5	26.0	32.9	39.5	48.5	57.8	68.2	77.7	89.5	103.0	118.0	133.3	145.1	N/A
Other Fossil Steam 4/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Combined Cycle	21.6	25.6	29.9	33.0	34.8	37.0	39.5	41.9	43.8	43.9	45.2	45.3	46.8	N/A
Combustion Turbine/Diesel	18.0	19.8	21.5	23.1	24.9	26.7	29.2	31.3	33.7	36.0	39.2	42.0	46.2	N/A
Nuclear Power	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	N/A
Pumped Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Renewable Sources 6/	3.5	4.0	4.8	5.3	6.3	6.9	7.7	8.3	9.0	9.4	9.8	10.0	10.4	N/A
Distributed Generation 7/	1.0	1.2	1.4	1.6	1.7	2.0	2.1	2.4	3.0	3.6	4.3	4.9	5.5	N/A
Total	70.6	82.5	96.5	108.5	122.3	136.4	152.8	167.7	184.9	201.9	222.5	241.4	260.0	N/A
Cumulative Electric Power Sector Additions	122.1	134.1	148.1	160.1	173.9	188.0	204.4	219.3	236.6	253.6	274.2	293.2	311.8	N/A
Cumulative Retirements 10/														
Coal Steam	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	N/A
Other Fossil Steam 4/	43.9	44.0	44.0	44.0	44.0	44.0	44.8	45.1	45.7	45.7	48.6	49.0	49.0	N/A
Combined Cycle	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	N/A
Combustion Turbine/Diesel	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	N/A
Nuclear Power	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Pumped Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Renewable Sources 6/	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	N/A
Total	59.7	59.8	59.8	59.8	59.8	59.8	60.6	60.8	61.4	61.5	64.3	64.7	64.7	N/A
Total Electric Power Sector Capacity	1001.3	1013.4	1027.4	1039.5	1053.3	1067.4	1083.0	1097.7	1114.3	1131.2	1149.0	1167.6	1186.2	0.9%
Commercial and Industrial Generators 11/														
Coal	7.3	7.7	10.2	12.6	15.1	16.5	17.9	19.2	20.7	22.1	23.6	23.6	23.6	6.9%
Petroleum	1.8	1.8	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	0.7%
Natural Gas	21.1	21.5	22.1	22.6	23.1	23.6	24.0	24.5	25.0	25.4	25.8	26.3	26.7	2.0%
Other Gaseous Fuels	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	-0.5%
Renewable Sources 6/	7.5	7.6	7.7	7.8	7.9	8.1	8.2	8.4	8.6	8.9	9.2	9.5	9.9	2.4%
Other	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	N/A
Total	39.8	40.9	44.2	47.1	50.2	52.2	54.2	56.3	58.3	60.5	62.7	63.5	64.3	3.1%
Cumulative Capacity Additions 9/	10.5	11.5	14.8	17.8	20.9	22.9	24.9	26.9	29.0	31.1	33.3	34.2	35.0	N/A

**Table 9. Electricity Generating Capacity
(gigawatts)**

1/ Net summer capacity is the steady hourly output that generating equipment is expected to supply to system load (exclusive of auxiliary power), as demonstrated by tests during summer peak demand.

2/ Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public.

3/ Includes plants that only produce electricity. Includes capacity increases (uprates) at existing units.

4/ Includes oil-, gas-, and dual-fired capacity.

5/ Nuclear capacity includes 3 gigawatts of uprates through 2030.

6/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal solid waste, landfill gas, other biomass, solar and wind power. Facilities co-firing biomass and coal are classified as coal. See tables 16 and 17 for more detail.

7/ Primarily peak-load capacity fueled by natural gas.

8/ Includes combined heat and power plants whose primary business is to sell electricity and heat to the public (i.e., those that report NAICS code 22).

9/ Cumulative additions after December 31, 2004.

10/ Cumulative retirements after December 31, 2004.

11/ Includes combined heat and power plants and electricity-only plants in the commercial and industrial sectors; and small on-site generating systems in the residential, commercial, and industrial sectors used primarily for own-use generation, but which may also sell some power to the grid.

N/A = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2003 and 2004 are model results and may differ slightly from official EIA data reports.

Sources: 2003 and 2004 electric generating capacity and projected planned additions: Energy Information Administration (EIA), Form EIA-860, "Annual Electric Generator Report" (preliminary). Projections: EIA, AEO2006 National Energy Modeling System run aeo2006.d111905a.