

Table A8. Electricity supply, disposition, prices, and emissions
(billion kilowatthours, unless otherwise noted)

Supply, disposition, prices, and emissions	Reference case							Annual growth 2010-2035 (percent)
	2009	2010	2015	2020	2025	2030	2035	
Generation by fuel type								
Electric power sector¹								
Power only²								
Coal	1712	1799	1560	1674	1779	1815	1857	0.1%
Petroleum	32	32	26	27	28	28	29	-0.3%
Natural gas ³	723	776	906	876	854	970	1068	1.3%
Nuclear power	799	807	830	887	917	913	894	0.4%
Pumped storage/other ⁴	2	2	2	2	2	2	2	-1.2%
Renewable sources ⁵	384	390	494	544	586	605	652	2.1%
Distributed generation (natural gas)	0	0	0	1	2	3	4	--
Total	3651	3806	3818	4011	4168	4336	4505	0.7%
Combined heat and power⁶								
Coal	29	32	31	31	30	31	31	-0.1%
Petroleum	4	3	1	1	1	1	1	-5.2%
Natural gas	118	122	125	124	124	124	123	0.0%
Renewable sources	5	5	4	5	5	5	5	-0.2%
Total	159	165	160	161	160	161	159	-0.1%
Total net generation	3810	3971	3979	4172	4328	4497	4664	0.6%
Less direct use	14	16	13	13	13	13	13	-0.9%
Net available to the grid	3796	3955	3965	4159	4316	4484	4652	0.7%
End-use generation⁷								
Coal	15	20	20	38	46	54	63	4.7%
Petroleum	3	3	2	2	2	2	2	-0.7%
Natural gas	80	84	98	108	121	142	174	3.0%
Other gaseous fuels ⁸	10	11	16	15	15	15	15	1.2%
Renewable sources ⁹	32	35	55	68	87	121	134	5.5%
Other ¹⁰	4	4	3	3	3	3	3	-0.8%
Total	144	157	194	234	274	338	391	3.7%
Less direct use	108	114	146	176	199	233	272	3.6%
Total sales to the grid	36	43	48	58	75	105	119	4.1%
Total electricity generation by fuel								
Coal	1756	1851	1610	1743	1855	1899	1951	0.2%
Petroleum	39	37	29	30	31	31	32	-0.6%
Natural gas	921	982	1129	1109	1101	1239	1368	1.3%
Nuclear power	799	807	830	887	917	913	894	0.4%
Renewable sources ^{5,9}	420	430	553	617	678	732	791	2.5%
Other ¹¹	19	21	21	21	20	20	21	-0.0%
Total electricity generation	3954	4128	4173	4406	4603	4835	5056	0.8%
Total net generation to the grid	3832	3998	4013	4217	4390	4590	4771	0.7%
Net imports	34	26	29	26	22	14	12	-3.0%
Electricity sales by sector								
Residential	1364	1451	1405	1473	1554	1651	1742	0.7%
Commercial	1307	1329	1358	1445	1532	1631	1726	1.0%
Industrial	917	962	1004	1052	1044	1023	1000	0.2%
Transportation	7	7	8	10	13	17	23	5.0%
Total	3596	3749	3774	3979	4142	4322	4490	0.7%
Direct use	122	130	160	189	212	246	285	3.2%
Total electricity use	3717	3879	3934	4168	4355	4568	4775	0.8%

Table A8. Electricity supply, disposition, prices, and emissions (continued)
(billion kilowatthours, unless otherwise noted)

Supply, disposition, prices, and emissions	Reference case							Annual growth 2010-2035 (percent)
	2009	2010	2015	2020	2025	2030	2035	
End-use prices								
(2010 cents per kilowatthour)								
Residential	11.6	11.5	11.3	11.1	11.0	10.8	11.1	-0.1%
Commercial	10.3	10.1	9.6	9.5	9.5	9.2	9.5	-0.2%
Industrial	6.8	6.7	6.3	6.3	6.4	6.4	6.8	0.1%
Transportation	12.1	11.1	10.2	10.0	10.4	10.5	10.9	-0.1%
All sectors average	9.9	9.8	9.4	9.2	9.3	9.2	9.5	-0.1%
(nominal cents per kilowatthour)								
Residential	11.5	11.5	12.2	13.2	14.5	15.7	17.6	1.7%
Commercial	10.1	10.1	10.3	11.3	12.4	13.3	15.2	1.6%
Industrial	6.8	6.7	6.8	7.5	8.4	9.3	10.8	1.9%
Transportation	11.9	11.1	11.0	11.9	13.7	15.2	17.3	1.8%
All sectors average	9.8	9.8	10.1	11.0	12.2	13.3	15.1	1.8%
Prices by service category								
(2010 cents per kilowatthour)								
Generation	6.4	6.2	5.6	5.7	6.0	6.0	6.4	0.2%
Transmission	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.0%
Distribution	2.8	2.8	2.9	2.7	2.5	2.4	2.4	-0.7%
(nominal cents per kilowatthour)								
Generation	6.3	6.2	6.1	6.8	7.9	8.7	10.2	2.0%
Transmission	0.8	0.8	0.9	1.0	1.1	1.1	1.2	1.9%
Distribution	2.8	2.8	3.1	3.2	3.3	3.5	3.7	1.1%
Electric power sector emissions¹								
Sulfur dioxide (million tons)	5.72	5.11	2.73	2.78	2.78	2.80	2.81	-2.4%
Nitrogen oxide (million tons)	1.99	2.06	1.82	1.93	1.96	1.96	1.97	-0.2%
Mercury (tons)	36.25	34.77	22.91	24.75	23.90	24.43	24.46	-1.4%

¹Includes electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public.

²Includes plants that only produce electricity.

³Includes electricity generation from fuel cells.

⁴Includes non-biogenic municipal waste. The U.S. Energy Information Administration estimates approximately 7 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See U.S. Energy Information Administration, *Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy*, (Washington, DC, May 2007).

⁵Includes conventional hydroelectric, geothermal, wood, wood waste, biogenic municipal waste, landfill gas, other biomass, solar, and wind power.

⁶Includes combined heat and power plants whose primary business is to sell electricity and heat to the public (i.e., those that report North American Industry Classification System code 22).

⁷Includes 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.

⁸Includes refinery gas and still gas.

⁹Includes conventional hydroelectric, geothermal, wood, wood waste, all municipal waste, landfill gas, other biomass, solar, and wind power.

¹⁰Includes batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

¹¹Includes pumped storage, non-biogenic municipal waste, refinery gas, still gas, batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

-- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2009 and 2010 are model results and may differ slightly from official EIA data reports.

Sources: 2009 and 2010 electric power sector generation; sales to utilities; net imports; electricity sales; electricity end-use prices; and emissions: U.S. Energy Information Administration (EIA), *Annual Energy Review 2010*, DOE/EIA-0384(2010) (Washington, DC, October 2011), and supporting databases. 2009 and 2010 prices: EIA, AEO2012 National Energy Modeling System run REF2012.D121011B. Projections: EIA, AEO2012 National Energy Modeling System run REF2012.D121011B.