

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

Supply, Disposition, and Prices	Reference Case							Annual Growth 2009-2035 (percent)
	2008	2009	2015	2020	2025	2030	2035	
Generation by Fuel Type								
Electric Power Sector¹								
Power Only²								
Coal	1932	1719	1746	1849	1987	2028	2076	0.7%
Petroleum	39	32	37	39	39	40	41	1.0%
Natural Gas ³	683	722	729	716	701	817	921	0.9%
Nuclear Power	806	799	839	877	877	877	874	0.3%
Pumped Storage/Other ⁴	0	2	-0	-0	-0	-0	-0	--
Renewable Sources ⁵	347	380	491	521	541	554	569	1.6%
Distributed Generation (Natural Gas)	0	0	1	2	3	4	5	--
Total	3807	3653	3843	4004	4148	4319	4485	0.8%
Combined Heat and Power⁶								
Coal	37	30	23	26	29	30	31	0.1%
Petroleum	4	4	0	0	0	0	0	-9.1%
Natural Gas	119	119	129	125	119	120	113	-0.2%
Renewable Sources	4	4	3	4	4	3	3	-1.0%
Total	167	161	155	155	153	153	148	-0.3%
Total Net Generation	3974	3814	3998	4158	4300	4472	4633	0.8%
Less Direct Use	35	35	33	33	33	33	33	-0.2%
Net Available to the Grid	3939	3779	3965	4125	4267	4439	4600	0.8%
End-Use Generation⁷								
Coal	19	23	30	32	52	79	111	6.3%
Petroleum	3	5	5	5	5	5	5	-0.3%
Natural Gas	80	90	141	160	180	211	250	4.0%
Other Gaseous Fuels ⁸	11	11	15	15	15	15	15	1.4%
Renewable Sources ⁹	34	36	63	82	128	147	152	5.7%
Other ¹⁰	2	2	1	1	1	1	1	-1.8%
Total	149	167	255	295	381	458	533	4.6%
Less Direct Use	120	135	205	230	276	334	392	4.2%
Total Sales to the Grid	29	31	49	65	105	124	142	6.0%
Total Electricity Generation by Fuel								
Coal	1987	1772	1799	1907	2069	2137	2218	0.9%
Petroleum	46	41	43	44	44	45	46	0.5%
Natural Gas	882	931	1000	1002	1003	1152	1288	1.3%
Nuclear Power	806	799	839	877	877	877	874	0.3%
Renewable Sources ^{5,9}	385	420	556	608	673	703	724	2.1%
Other ¹¹	16	18	16	16	16	16	16	-0.3%
Total Electricity Generation	4123	3981	4253	4453	4682	4930	5167	1.0%
Total Net Generation to the Grid	3968	3810	4014	4190	4372	4563	4742	0.8%
Net Imports	33	34	33	27	22	13	14	-3.4%
Electricity Sales by Sector								
Residential	1380	1363	1348	1394	1461	1538	1613	0.7%
Commercial	1336	1323	1416	1526	1636	1761	1886	1.4%
Industrial	1009	882	1038	1046	1031	997	962	0.3%
Transportation	7	7	8	10	13	18	22	4.6%
Total	3732	3574	3811	3976	4142	4314	4483	0.9%
Direct Use	154	170	239	263	309	367	425	3.6%
Total Electricity Use	3886	3745	4049	4240	4451	4681	4908	1.0%

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

Supply, Disposition, and Prices	Reference Case							Annual Growth 2009-2035 (percent)
	2008	2009	2015	2020	2025	2030	2035	
End-Use Prices								
(2009 cents per kilowatthour)								
Residential	11.3	11.5	10.9	10.7	10.6	10.6	10.8	-0.2%
Commercial	10.4	10.1	9.1	9.0	9.1	9.1	9.2	-0.3%
Industrial	6.8	6.8	6.0	6.1	6.1	6.2	6.4	-0.2%
Transportation	11.8	11.9	10.0	9.6	10.1	10.5	11.0	-0.3%
All Sectors Average	9.8	9.8	8.9	8.8	8.9	9.0	9.2	-0.2%
(nominal cents per kilowatthour)								
Residential	11.2	11.5	11.8	12.9	14.1	15.4	17.2	1.6%
Commercial	10.3	10.1	9.9	10.9	12.0	13.2	14.7	1.5%
Industrial	6.8	6.8	6.6	7.3	8.1	9.0	10.2	1.6%
Transportation	11.7	11.9	10.9	11.6	13.3	15.3	17.6	1.5%
All Sectors Average	9.7	9.8	9.7	10.7	11.8	13.0	14.7	1.6%
Prices by Service Category								
(2009 cents per kilowatthour)								
Generation	6.1	6.0	5.0	5.3	5.6	5.8	6.0	0.0%
Transmission	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.5%
Distribution	2.9	3.0	3.0	2.8	2.6	2.4	2.3	-1.0%
(nominal cents per kilowatthour)								
Generation	6.1	6.0	5.5	6.4	7.4	8.4	9.6	1.8%
Transmission	0.7	0.7	0.9	1.0	1.1	1.2	1.4	2.3%
Distribution	2.9	3.0	3.3	3.4	3.4	3.5	3.7	0.8%
Electric Power Sector Emissions¹								
Sulfur Dioxide (million tons)	7.62	5.72	3.77	3.68	4.09	3.97	3.94	-1.4%
Nitrogen Oxide (million tons)	3.01	1.99	1.99	1.98	2.00	2.03	2.05	0.1%
Mercury (tons)	45.27	40.66	26.88	26.82	28.21	29.08	29.91	-1.2%

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 2008 and 2009 are model results and may differ slightly from official EIA data reports.

Sources: 2008 and 2009 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 2009*, DOE/EIA-0384(2009) (Washington, DC, August 2010), and supporting databases. 2008 and 2009 prices: EIA, AEO2011 National Energy Modeling System run REF2011.D020911A. Projections: EIA, AEO2011 National Energy Modeling System run REF2011.D020911A.