



From 2011 AEO Early Release reference case at <http://www.eia.gov/forecasts/archive/aeo11/er/>

**Electricity Supply, Disposition, Prices, and Emissions, Early release reference
(billion kilowatthours, unless otherwise noted)**

Supply, Disposition, and Prices	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Growth Rate (2009-2035)		
Net Generation by Fuel Type																															
Electric Power Sector 1/ Power Only 2/																															
Coal	1932	1719	1805	1761	1782	1767	1768	1753	1781	1786	1797	1816	1849	1876	1905	1932	1969	1990	2007	2022	2028	2042	2052	2061	2071	2078	2081	2092	0.80%		
Petroleum	39	32	39	38	38	38	37	38	38	38	38	39	40	40	40	40	41	40	41	41	41	41	41	41	41	41	41	41	42	1.10%	
Natural Gas 3/	683	722	785	734	693	703	688	703	691	700	710	713	700	695	694	693	685	688	695	713	742	761	790	813	834	854	879	903	0.90%		
Nuclear Power	806	799	803	803	813	827	833	839	841	852	862	872	882	882	882	882	882	882	882	882	882	882	882	882	882	881	880	879	0.40%		
Pumped Storage/Other 4/	0	2	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 5/ Distributed Generation (Natural Gas)	347	380	371	407	460	470	484	496	507	512	515	518	525	526	528	531	535	542	548	546	550	552	554	558	561	563	567	569	1.60%		
Total	3807	3653	3803	3743	3786	3806	3810	3830	3858	3888	3924	3958	3997	4020	4052	4081	4113	4145	4175	4207	4245	4281	4321	4357	4391	4419	4453	4488	0.80%		
Combined Heat and Power 6/																															
Coal	37	30	27	26	24	26	24	25	25	26	26	26	25	28	28	29	29	29	29	29	29	29	29	30	30	32	31	31	0.10%		
Petroleum	4	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	-9.10%		
Natural Gas	119	119	130	129	123	133	128	131	127	126	127	128	123	123	120	120	120	118	119	119	119	118	120	119	120	118	116	114	-0.20%		
Renewable Sources	4	4	3	3	3	3	3	3	3	3	3	4	4	4	3	4	4	4	4	4	4	3	3	3	4	3	3	3	-1.30%		
Total	167	161	160	157	151	162	155	159	156	156	157	157	152	155	152	153	153	152	152	152	152	152	153	152	154	153	151	149	-0.30%		
Total Net Generation	3974	3814	3963	3901	3937	3967	3965	3989	4014	4044	4081	4115	4149	4175	4204	4234	4266	4296	4328	4360	4397	4431	4474	4509	4545	4572	4604	4637	0.80%		
Less Direct Use	35	35	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	-0.20%		
Net Available to the Grid	3939	3779	3930	3867	3903	3934	3931	3956	3981	4011	4048	4082	4116	4142	4171	4201	4233	4263	4295	4326	4364	4398	4441	4476	4512	4539	4571	4604	0.80%		
End-Use Generation 7/																															
Coal	19	23	23	23	23	23	23	31	32	33	33	34	35	36	38	40	42	44	46	49	52	55	58	62	65	68	71	74	4.60%		
Petroleum	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	-0.30%		
Natural Gas	80	90	104	116	124	131	138	143	148	152	155	158	162	166	169	173	177	182	187	193	199	206	214	222	230	238	245	253	4.00%		
Other Gaseous Fuels 8/	11	11	11	11	14	15	15	15	15	14	14	14	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	1.40%		
Renewable Sources 9/	34	36	41	46	50	55	57	63	66	69	72	76	83	90	100	109	119	129	136	144	147	148	148	149	150	151	152	153	5.80%		
Other 10/	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-1.80%		
Total	149	167	184	201	217	230	238	258	268	274	281	290	301	313	327	343	359	376	391	407	419	430	442	454	466	478	490	502	4.30%		
Less Direct Use	120	135	150	163	176	186	193	208	216	220	225	229	235	241	248	255	264	274	285	296	306	315	325	334	344	354	363	373	4.00%		
Total Sales to the Grid	29	31	35	38	41	44	46	50	52	54	57	61	66	72	80	87	95	102	106	111	113	115	117	120	122	124	127	129	5.60%		
Total Electricity Generation by Fuel																															
Coal	1987	1772	1855	1809	1829	1815	1814	1810	1837	1845	1857	1876	1909	1940	1972	2001	2040	2063	2083	2101	2109	2127	2140	2152	2166	2177	2184	2197	0.80%		
Petroleum	46	41	45	44	43	43	42	43	43	43	43	45	45	45	45	45	46	46	46	46	46	46	46	46	46	46	47	47	0.50%		

Natural Gas	882	931	1018	979	940	968	954	977	968	979	994	1000	987	986	985	989	984	991	1004	1028	1063	1087	1127	1157	1187	1212	1244	1274	1.20%	
Nuclear Power	806	799	803	803	813	827	833	839	841	852	862	872	882	882	882	882	882	882	882	882	882	882	882	882	882	881	880	879	0.40%	
Renewable Sources 5,9/ Other 11/	385	420	415	455	513	528	544	562	577	584	591	598	612	620	631	644	658	674	689	694	700	703	705	710	714	717	723	725	2.10%	
Total Electricity Generation	4123	3981	4148	4102	4154	4197	4203	4247	4281	4318	4362	4405	4450	4488	4531	4577	4625	4672	4719	4766	4816	4861	4916	4963	5011	5050	5094	5139	1.00%	
Total Net Generation to the Grid	3968	3810	3965	3905	3945	3977	3977	4006	4032	4065	4104	4143	4182	4214	4251	4288	4328	4365	4401	4437	4478	4513	4558	4596	4634	4663	4697	4733	0.80%	
Net Imports	33	34	35	31	33	32	33	33	34	33	30	29	27	30	29	26	25	22	20	21	20	18	13	14	15	15	14	-3.40%		
Electricity Sales by Sector																														
Residential	1380	1363	1455	1356	1366	1348	1346	1346	1355	1361	1371	1382	1392	1402	1416	1430	1448	1460	1476	1492	1511	1523	1539	1554	1573	1584	1598	1613	0.70%	
Commercial	1336	1323	1349	1355	1366	1378	1394	1413	1434	1456	1479	1502	1523	1545	1567	1588	1611	1635	1659	1685	1710	1735	1761	1786	1812	1836	1861	1885	1.40%	
Industrial	1009	882	937	971	992	1033	1023	1035	1036	1037	1039	1040	1044	1044	1041	1037	1033	1027	1020	1012	1004	999	993	988	980	973	965	957	0.30%	
Transportation	7	7	7	7	7	7	8	8	8	8	9	9	9	9	10	10	11	11	12	13	13	14	15	15	16	17	18	18	19	4.10%
Total	3732	3575	3749	3689	3731	3766	3771	3803	3833	3863	3898	3933	3969	4002	4035	4067	4104	4135	4168	4202	4240	4271	4308	4344	4382	4410	4442	4474	0.90%	
Direct Use	154	170	183	197	209	219	226	242	249	253	258	262	268	274	281	288	297	307	318	329	339	348	358	368	377	387	396	406	3.40%	
Total Electricity Use	3886	3745	3932	3886	3940	3986	3997	4044	4082	4116	4156	4195	4237	4276	4315	4356	4401	4442	4485	4532	4578	4619	4666	4712	4759	4797	4838	4880	1.00%	
End-Use Prices (2009 cents per kilowatthour)																														
Residential	11.3	11.5	11.5	10.8	10.9	10.9	10.9	10.9	10.9	10.8	10.8	10.8	10.7	10.7	10.7	10.7	10.6	10.7	10.7	10.7	10.7	10.7	10.6	10.7	10.7	10.7	10.8	10.8	-0.20%	
Commercial	10.4	10.1	9.7	9.4	9.4	9.3	9.2	9.2	9.2	9.2	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.2	9.2	-0.30%	
Industrial	6.8	6.8	6.5	6.2	6.2	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.2	6.2	6.2	6.2	6.2	6.3	6.3	6.3	6.4	6.4	-0.20%	
Transportation	11.8	11.9	10.3	10.6	10.6	10.5	10.4	10.3	10.1	9.9	9.7	9.6	9.5	9.5	9.6	9.6	9.7	9.8	9.9	9.9	10	10.1	10.2	10.3	10.4	10.5	10.7	10.8	-0.40%	
All Sectors Average	9.8	9.8	9.6	9.1	9.1	9	9	9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	9	9	9	9	9	9.1	9.2	9.2	-0.20%		
(nominal cents per kilowatthour)																														
Residential	11.2	11.5	11.6	11	11.2	11.5	11.7	11.9	12.1	12.3	12.5	12.7	13	13.2	13.4	13.6	13.8	14.1	14.4	14.6	14.9	15.2	15.5	15.8	16.1	16.5	16.9	17.3	1.60%	
Commercial	10.3	10.1	9.8	9.6	9.7	9.7	9.9	10.1	10.2	10.4	10.6	10.8	11	11.2	11.4	11.6	11.8	12.1	12.3	12.5	12.7	13	13.2	13.4	13.7	14.1	14.4	14.7	1.50%	
Industrial	6.8	6.8	6.5	6.3	6.4	6.4	6.5	6.7	6.8	6.9	7.1	7.2	7.4	7.5	7.6	7.8	8	8.1	8.3	8.5	8.7	8.9	9	9.2	9.5	9.7	10	10.2	1.60%	
Transportation	11.7	11.9	10.4	10.8	10.9	11.1	11.2	11.3	11.3	11.3	11.4	11.5	11.7	12	12.3	12.6	12.9	13.3	13.7	14	14.5	14.8	15.3	15.7	16.2	16.7	17.2	1.40%		
All Sectors Average	9.7	9.8	9.7	9.3	9.4	9.5	9.6	9.8	10	10.2	10.3	10.5	10.7	10.9	11.1	11.3	11.6	11.8	12.1	12.3	12.5	12.8	13	13.3	13.6	14	14.4	14.7	1.60%	
Prices by Service Category (2009 cents per kilowatthour)																														
Generation	6.1	6	5.8	5.2	5.2	5.1	5.1	5.1	5.2	5.2	5.2	5.3	5.3	5.3	5.4	5.5	5.5	5.6	5.6	5.7	5.7	5.8	5.8	5.8	5.9	5.9	6	6	0.00%	
Transmission	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.50%	
Distribution	2.9	3	3.1	3.1	3.1	3.1	3.1	3	3	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.3	2.3	-1.00%	
(nominal cents per kilowatthour)																														
Generation	6.1	6	5.8	5.4	5.3	5.4	5.5	5.6	5.8	5.9	6.1	6.2	6.4	6.6	6.8	7	7.2	7.4	7.6	7.8	8	8.2	8.4	8.6	8.9	9.1	9.4	9.7	1.80%	
Transmission	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	1	1	1	1	1	1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.4	2.30%
Distribution	2.9	3	3.1	3.1	3.2	3.2	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.6	3.6	3.7	3.7	0.80%	
Electric Power Sector Emissions 1/																														
Sulfur Dioxide (million tons)	7.62	5.72	5.64	5.05	4.41	3.84	3.76	3.76	3.7	3.58	3.57	3.56	3.76	3.81	3.95	4.02	4.23	4.25	4.31	4.27	4.14	3.99	4.02	4.01	4.09	3.88	3.77	3.83	-1.50%	
Nitrogen Oxide (million tons)	3.01	1.99	2.55	2.21	2.13	2.09	2.06	2	1.98	1.97	1.97	1.99	2.01	2	2	2	2.02	2.02	2.01	2.01	2.02	2.04	2.04	2.04	2.05	2.05	2.03	2.04	0.10%	
Mercury (tons)	45.27	40.66	40.14	37.36	36.84	36.32	36.84	27.13	26.95	26.89	27.1	27.06	27.78	28.31	28.65	28.87	29.33	29.18	29.1	28.58	29.47	29.1	29	29.28	29.29	29.15	29.02	29.39	-1.20%	

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

2/ Includes plants that only produce electricity.

3/ Includes electricity generation from fuel cells.

4/ Includes non-biogenic municipal waste. The U.S. Energy Information Administration estimates that in 2009 approximately 6 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).

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

6/ Includes 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).

7/ 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.

8/ Includes refinery gas and still gas.

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

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

11/ Includes 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.

Projections: EIA, AEO2011 National Energy Modeling System.