

Table 18. Projections of annual average economic growth, 2005-2030

<i>Projection</i>	<i>Average annual percentage growth</i>			
	<i>2005-2010</i>	<i>2010-2015</i>	<i>2015-2020</i>	<i>2020-2030</i>
<i>AEO2006</i>	3.2	2.9	3.1	2.8
<i>AEO2007</i>				
<i>Reference</i>	3.0	2.8	3.0	2.8
<i>Low growth</i>	2.3	2.2	2.6	2.1
<i>High growth</i>	3.7	3.4	3.4	3.4
<i>GII</i>	3.0	2.7	2.9	2.8
<i>OMB</i>	3.2	NA	NA	NA
<i>CBO</i>	3.2	2.7	NA	NA
<i>Blue Chip</i>	3.0	3.0	NA	NA
<i>INFORUM</i>	2.9	2.7	2.7	NA
<i>SSA</i>	3.0	2.2	2.1	1.9
<i>BLS</i>	2.9	2.9	NA	NA
<i>EVA</i>	3.2	2.7	2.3	NA
<i>IEA</i>	2.9	2.9	1.9	1.9

NA = not available.

**Table 19. Projections of world oil prices, 2010-2030
(2005 dollars per barrel)**

<i>Projection</i>	2010	2015	2020	2025	2030
<i>AEO2006 (reference case)</i>	48.72	49.24	52.24	55.72	58.69
<i>AEO2007</i>					
<i>Reference</i>	57.47	49.87	52.04	56.37	59.12
<i>Low price</i>	49.21	33.99	34.10	34.89	35.68
<i>High price</i>	69.21	79.57	89.12	94.40	100.14
<i>GII</i>	57.11	46.54	45.06	43.21	40.25
<i>IEA (reference)</i>	51.50	47.80	50.20	52.60	55.00
<i>EEA</i>	56.94	49.80	47.42	45.16	NA
<i>DB</i>	39.66	40.11	39.73	39.95	40.16
<i>SEER</i>	44.21	45.27	45.87	46.23	46.60
<i>EVA</i>	42.28	42.35	45.76	49.45	NA

Table 20. Projections of average annual growth rates for energy consumption, 2005-2030 (percent)

<i>Energy use</i>	<i>History</i>	<i>Projections</i>	
	1980-2005	<i>AEO2007</i>	<i>GII</i>
<i>Petroleum*</i>	0.9	1.0	0.9
<i>Natural gas*</i>	0.0	0.9	0.1
<i>Coal*</i>	-1.7	1.4	-0.2
<i>Electricity</i>	2.2	1.4	1.3
<i>Delivered energy</i>	0.7	1.1	0.8
<i>Electricity losses</i>	1.9	1.0	0.7
<i>Primary energy</i>	1.0	1.1	0.7

**Excludes consumption by electricity generators in the electric power sector; includes consumption for end-use combined heat and power generation.*

Table 21. Comparison of electricity projections, 2015 and 2030 (billion kilowatthours, except where noted)

Projection	2005	AEO2007			Other projections		
		Reference	Low economic growth	High economic growth	GII	EVA	EEA
2015							
Average end-use price (2005 cents per kilowatthour)	8.1	7.7	7.5	7.9	8.6	NA	NA
Residential	9.4	8.9	8.7	9.1	10.0	9.7	NA
Commercial	8.6	8.0	7.7	8.2	9.2	8.7	NA
Industrial	5.7	5.6	5.4	5.9	5.8	5.6	NA
Total generation plus imports	4,063	4,729	4,597	4,865	4,610	4,720	4,766
Coal	2,015	2,295	2,235	2,353	2,244	2,336	NA
Oil	122	103	100	105	92	NA	NA
Natural gas ^a	756	1,023	959	1,068	934	982	NA
Nuclear	780	812	809	837	829	860	NA
Hydroelectric/other ^b	365	487	485	493	492	523	NA
Net imports	25	8	8	10	20	20	NA
Electricity sales	3,660	4,251	4,133	4,370	4,186	4,433	4,302
Residential	1,365	1,591	1,560	1,622	1,592	1,665	1,597
Commercial/other ^c	1,274	1,557	1,532	1,583	1,485	1,709	1,507
Industrial	1,021	1,103	1,041	1,165	1,110	1,059	1,198
Capability, including CHP (gigawatts)^d	988	997	981	1,018	1,011	1,045	1,035
Coal	315	329	322	336	333	351	346
Oil and natural gas	448	430	422	440	429	453	457
Nuclear	100	102	102	106	104	108	102
Hydroelectric/other	125	136	135	136	146	132	130
2030							
Average end-use price (2005 cents per kilowatthour)	8.1	8.1	7.8	8.4	8.5	NA	NA
Residential	9.4	9.1	8.8	9.6	9.9	NA	NA
Commercial	8.6	8.3	7.9	8.7	9.1	NA	NA
Industrial	5.7	5.9	5.6	6.3	5.6	NA	NA
Total generation plus imports	4,065	5,810	5,255	6,375	5,586	NA	NA
Coal	2,015	3,330	2,871	3,672	2,999	NA	NA
Oil	122	107	104	112	76	NA	NA
Natural gas ^a	756	942	924	1,010	952	NA	NA
Nuclear	780	896	845	1,010	826	NA	NA
Hydroelectric/other ^b	365	522	499	555	719	NA	NA
Net imports	25	13	12	15	15	NA	NA
Electricity sales	3,660	5,168	4,682	5,654	5,071	NA	NA
Residential	1,365	1,896	1,773	2,016	1,921	NA	NA
Commercial/other ^c	1,274	2,073	1,907	2,234	1,872	NA	NA
Industrial	1,021	1,199	1,003	1,403	1,278	NA	NA
Capability, including CHP (gigawatts)^d	988	1,220	1,112	1,331	1,157	NA	NA
Coal	315	465	403	511	443	NA	NA
Oil and natural gas	448	500	464	544	404	NA	NA
Nuclear	100	113	106	127	109	NA	NA
Hydroelectric/other	125	142	138	149	202	NA	NA

^aIncludes supplemental gaseous fuels. For EVA, represents total oil and natural gas. ^b“Other” includes conventional hydroelectric, pumped storage, geothermal, wood, wood waste, municipal waste, other biomass, solar and wind power, batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, petroleum coke, and miscellaneous technologies. ^c“Other” includes sales of electricity to government, railways, and street lighting authorities. ^dEIA capacity is net summer capability, including combined heat and power plants. GII capacity is nameplate, excluding cogeneration plants.

CHP = combined heat and power. NA = not available.

Sources: **2005 and AEO2007:** AEO2007 National Energy Modeling System, runs AEO2007.D112106A (reference case), LM2007.D112106A (low economic growth case), and HM2007.D112106A (high economic growth case). **GII:** Global Insight, Inc., *2006 U.S. Energy Outlook* (November 2006). **EVA:** Energy Ventures Analysis, Inc., *FUELCAST: Long-Term Outlook* (August 2006). **EEA:** Energy and Environmental Analysis, Inc., *EEA's Compass Service Base Case* (October 2006).

Table 22. Comparison of natural gas projections, 2015, 2025, and 2030 (trillion cubic feet, except where noted)

Projection	2005	AEO2007			Other projections					
		Refer- ence	Low price	High price	GII ^a	EVA	EEA ^b	DB	SEER	Altos
2015										
<i>Dry gas production</i> ^c	18.23	19.60	19.82	18.77	17.45	17.93	20.42	19.53	18.87	18.19
<i>Net imports</i>	3.57	5.62	6.46	4.81	5.73	7.95	5.40	4.90	6.50	8.06
<i>Pipeline</i>	3.01	2.63	2.48	2.52	NA	3.73	2.26	2.60	2.80	1.22
<i>LNG</i>	0.57	2.99	3.98	2.29	NA	4.22	3.13	2.29	3.70	6.84
<i>Consumption</i>	21.98	25.32	26.40	23.71	23.38	25.67	26.00	24.20	25.37	25.87 ^d
<i>Residential</i>	4.84	5.19	5.29	5.11	4.99	5.14	5.49	5.30	5.12	5.41
<i>Commercial</i>	3.05	3.53	3.65	3.42	3.05	3.11	3.40	3.42	3.18	3.54
<i>Industrial</i> ^e	6.64	7.67	7.71	7.44	6.48	6.95	6.39	7.19	6.99	7.53 ^f
<i>Electricity generators</i> ^g	5.78	7.11	7.89	5.99	7.26	8.50	8.53	6.71	8.10	9.39
<i>Other</i> ^h	1.66	1.83	1.86	1.75	1.61	1.97	2.18	1.59	1.99	NA
<i>Lower 48 wellhead price (2005 dollars per thousand cubic feet)</i> ⁱ	7.51	4.99	4.01	5.83	6.10	5.55	6.51	6.07	5.12	5.60
<i>End-use prices (2005 dollars per thousand cubic feet)</i>										
<i>Residential</i>	12.80	10.55	9.48	11.48	11.28	NA	10.95	NA	10.59	NA
<i>Commercial</i>	11.54	8.73	7.68	9.64	10.05	NA	9.98	NA	8.83	NA
<i>Industrial</i> ^j	8.41	5.82	4.80	6.70	7.87	NA	7.95	NA	6.45	NA
<i>Electricity generators</i>	8.42	5.66	4.74	6.40	6.68	NA	7.54	NA	6.11	NA
2025										
<i>Dry gas production</i> ^c	18.23	20.59	20.44	20.73	18.26	18.82	22.61	16.67	20.91	16.41
<i>Net imports</i>	3.57	5.58	8.70	3.32	5.23	9.93	6.28	9.54	7.80	12.59
<i>Pipeline</i>	3.01	1.20	1.58	1.03	NA	2.11	1.24	1.25	1.80	1.10
<i>LNG</i>	0.57	4.38	7.11	2.29	NA	7.82	5.04	8.29	6.00	11.49
<i>Consumption</i>	21.98	26.30	29.27	24.13	23.69	28.53	29.03	26.18	28.71	29.01 ^d
<i>Residential</i>	4.84	5.29	5.38	5.21	4.97	5.18	5.86	5.85	5.64	6.03
<i>Commercial</i>	3.05	3.98	4.06	3.82	3.07	3.42	3.55	3.87	3.45	4.14
<i>Industrial</i> ^e	6.64	8.42	8.09	7.94	6.53	7.95	7.10	7.94	7.66	7.69 ^f
<i>Electricity generators</i> ^g	5.78	6.59	9.71	4.82	7.45	9.74	10.25	6.98	9.78	11.15
<i>Other</i> ^h	1.66	2.02	2.03	1.99	1.67	2.24	2.27	1.54	2.18	NA
<i>Lower 48 wellhead price (2005 dollars per thousand cubic feet)</i> ⁱ	7.51	5.62	4.75	6.70	6.21	6.06	6.83	5.71	5.61	6.96
<i>End-use prices (2005 dollars per thousand cubic feet)</i>										
<i>Residential</i>	12.80	11.30	10.32	12.43	11.21	NA	10.95	NA	11.19	NA
<i>Commercial</i>	11.54	9.23	8.29	10.34	10.02	NA	10.08	NA	9.51	NA
<i>Industrial</i> ^j	8.41	6.40	5.52	7.51	7.91	NA	8.22	NA	7.12	NA
<i>Electricity generators</i>	8.42	6.22	5.56	7.18	6.78	NA	7.85	NA	6.78	NA

NA = not available. See notes and sources at end of table.

Table 22. Comparison of natural gas projections, 2015, 2025, and 2030 (continued)
(trillion cubic feet, except where noted)

Projection	2005	AEO2007			Other projections					
		Refer- ence	Low price	High price	GII ^a	EVA	EEA ^b	DB	SEER	Altos
		2030								
Dry gas production^c	18.23	20.53	20.64	20.90	18.27	NA	NA	16.32	21.17	14.33
Net imports	3.57	5.45	8.85	3.17	5.25	NA	NA	10.72	9.08	12.67
Pipeline	3.01	0.92	1.31	0.84	NA	NA	NA	1.25	1.44	0.70
LNG	0.57	4.53	7.54	2.33	NA	NA	NA	9.47	7.64	11.97
Consumption	21.98	26.12	29.74	24.09	23.74	NA	NA	27.20	30.26	30.95^d
Residential	4.84	5.31	5.40	5.20	4.92	NA	NA	6.15	5.92	6.34
Commercial	3.05	4.24	4.32	4.01	3.07	NA	NA	4.06	3.56	4.44
Industrial ^e	6.64	8.65	8.34	8.18	6.79	NA	NA	8.34	7.82	7.78 ^f
Electricity generators ^g	5.78	5.92	9.64	4.37	7.27	NA	NA	7.12	10.74	12.39
Other ^h	1.66	2.01	2.05	2.00	1.68	NA	NA	1.52	2.22	NA
Lower 48 wellhead price (2005 dollars per thousand cubic feet)ⁱ	7.51	5.98	5.06	7.63	6.08	NA	NA	5.45	6.07	7.55
End-use prices (2005 dollars per thousand cubic feet)										
Residential	12.80	11.77	10.71	13.52	10.98	NA	NA	NA	11.58	NA
Commercial	11.54	9.58	8.58	11.32	9.81	NA	NA	NA	9.96	NA
Industrial ^j	8.41	6.76	5.82	8.46	7.74	NA	NA	NA	7.58	NA
Electricity generators	8.42	6.51	5.88	8.02	6.65	NA	NA	NA	7.25	NA

NA = not available.

^aPreviously DRI-WEFA. Conversion factors: 1,000 cubic feet = 1.027 million Btu for production, 1.028 million Btu for end-use consumption, 1.019 million Btu for electric power. ^bThe EEA projection shows a cyclical price trend; projected values for isolated years may be misleading. ^cDoes not include supplemental fuels. ^dExcludes consumption for transportation and pipeline fuels. ^eIncludes consumption for industrial CHP plants and a small number of electricity-only plants; excludes consumption by nonutility generators. ^fIncludes lease and plant fuel. ^gIncludes consumption of energy by electricity-only and CHP plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes electric utilities, small power producers, and exempt wholesale generators. ^hIncludes lease, plant, and pipeline fuel and fuel consumed in natural gas vehicles. ⁱ2005 wellhead natural gas prices for EEA, EVA, and DB are \$7.77, \$8.84, and \$8.36, respectively. ^jThe 2005 industrial natural gas prices in other projections are nearly a dollar higher than EIA's.

Sources: **2005 and AEO2007:** AEO2007 National Energy Modeling System, runs AEO2007.D112106A (reference case), LP2007.D112106A (low price case), HP2007.D112106A (high price case). **GII:** Global Insight, Inc., *2006 U.S. Energy Outlook* (November 2006). **EVA:** Energy Ventures Analysis, Inc., *FUELCAST: Long-Term Outlook* (August 2006). **EEA:** Energy and Environmental Analysis, Inc., *EEA's Compass Service Base Case* (October 2006). **DB:** Deutsche Bank AG, e-mail from Adam Sieminski on November 27, 2006. **SEER:** Strategic Energy and Economic Research, Inc., *Natural Gas Outlook* (April 2006). **Altos:** Altos Partners North American Regional Gas Model (NARG) Long-Term Base Case (November 2006).

Table 23. Comparison of petroleum projections, 2015, 2025, and 2030
(million barrels per day, except where noted)

Projection	2005	AEO2007			Other projections			
		Reference	Low price	High price	GII	EVA	DB	IEA
2015								
Crude oil and NGL production	6.90	7.73	8.02	7.41	6.47	6.09	6.28	NA
Crude oil	5.18	5.91	6.18	5.67	4.80	4.45	4.78	5.00
Natural gas liquids	1.72	1.82	1.84	1.74	1.67	1.64	1.50	NA
Total net imports	12.57	12.52	13.29	11.79	13.75	NA	15.37	NA
Crude oil	10.09	10.49	10.62	10.18	NA	NA	NA	NA
Petroleum products	2.48	2.03	2.67	1.61	NA	NA	NA	NA
Petroleum demand	20.75	22.86	23.61	21.87	20.22	NA	23.26	23.10
Motor gasoline	9.16	10.18	10.45	9.53	NA	NA	10.32	NA
Jet fuel	1.68	2.10	2.12	2.08	NA	NA	1.87	NA
Distillate fuel	4.12	4.86	5.04	4.72	NA	NA	4.81	NA
Residual fuel	0.92	0.82	1.03	0.73	NA	NA	0.78	NA
Other	4.87	4.89	4.96	4.81	NA	NA	5.48	NA
Import share of product supplied (percent)	60	55	56	54	68	NA	66	NA
2025								
Crude oil and NGL production	6.90	7.30	7.34	7.68	6.02	4.95	5.11	NA
Crude oil	5.18	5.58	5.60	5.97	4.27	3.35	3.91	NA
Natural gas liquids	1.72	1.72	1.74	1.70	1.75	1.60	1.20	NA
Total net imports	12.57	14.87	16.98	11.70	17.03	NA	19.31	NA
Crude oil	10.09	12.20	13.27	10.19	NA	NA	NA	NA
Petroleum products	2.48	2.67	3.71	1.51	NA	NA	NA	NA
Petroleum demand	20.75	25.34	26.77	23.50	23.05	NA	26.15	NA
Motor gasoline	9.16	11.71	12.26	10.14	NA	NA	11.57	NA
Jet fuel	1.68	2.22	2.24	2.12	NA	NA	2.14	NA
Distillate fuel	4.12	5.48	5.88	5.35	NA	NA	5.47	NA
Residual fuel	0.92	0.82	1.11	0.75	NA	NA	0.83	NA
Other	4.87	5.11	5.29	5.14	NA	NA	6.15	NA
Import share of product supplied (percent)	60	59	64	50	74	NA	74	NA
2030								
Crude oil and NGL production	6.90	7.10	6.98	7.75	5.79	NA	4.62	NA
Crude oil	5.18	5.39	5.25	6.04	4.04	NA	3.53	4.00
Natural gas liquids	1.72	1.72	1.73	1.71	1.75	NA	1.08	NA
Total net imports	12.57	16.37	19.31	12.04	17.03	NA	21.13	NA
Crude oil	10.09	13.09	14.35	10.59	NA	NA	NA	NA
Petroleum products	2.48	3.28	4.95	1.45	NA	NA	NA	NA
Petroleum demand	20.75	26.95	28.84	24.58	22.82	NA	27.54	25.00
Motor gasoline	9.16	12.53	13.23	10.47	NA	NA	12.16	NA
Jet fuel	1.68	2.27	2.29	2.06	NA	NA	2.27	NA
Distillate fuel	4.12	5.95	6.64	5.85	NA	NA	5.81	NA
Residual fuel	0.92	0.83	1.16	0.76	NA	NA	0.85	NA
Other	4.87	5.36	5.53	5.45	NA	NA	6.46	NA
Import share of product supplied (percent)	60	61	67	49	75	NA	77	NA

NA = Not available.

Sources: **2005 and AEO2007:** AEO2007 National Energy Modeling System, runs AEO2007.D112106A (reference case), LP2007.D112106A (low price case), HP2007.D112106A (high price case). **GII:** Global Insight, Inc., *2006 U.S. Energy Outlook* (November 2006). **EVA:** Energy Ventures Analysis, Inc., *FUELCAST: Long-Term Outlook* (August 2006). **DB:** Deutsche Bank AG, e-mail from Adam Sieminski on November 27, 2006. **IEA:** International Energy Agency, *World Energy Outlook 2006* (Paris, France, November 2006).

Table 24. Comparison of coal projections, 2015, 2025, and 2030 (million short tons, except where noted)

Projection	2005	AEO2007			Other projections		
		Reference	Low economic growth	High economic growth	GII ^a	EVA	Hill
2015							
Production	1,131	1,266	1,227	1,300	24.3	1,289	NA
Consumption by sector							
Electric power	1,039	1,178	1,151	1,202	22.5	1,179	NA
Coke plants	23	21	20	23	NA	24	NA
Coal-to-liquids	NA	16	6	25	NA	NA	NA
Other industrial/buildings	66	67	66	70	2.1 ^b	73	NA
Total	1,128	1,282	1,243	1,318	24.6	1,276	NA
Net coal exports	21.1	-4.6	-3.6	-7.3	-0.3	2.1	NA
Exports	49.9	37.4	38.4	36.5	NA	44.0	NA
Imports	28.8	42.0	42.0	43.8	NA	41.9	NA
Minemouth price							
(2005 dollars per short ton)	23.34	22.41	22.06	22.82	NA	22.73	19.85 ^c
(2005 dollars per million Btu)	1.15	1.11	1.09	1.13	NA	1.12	0.99 ^c
Average delivered price to electricity generators							
(2005 dollars per short ton)	30.83	31.84	31.43	32.42	NA	34.02 ^d	31.53 ^c
(2005 dollars per million Btu)	1.53	1.60	1.58	1.63	1.42	1.67 ^c	1.57 ^c
2025							
Production	1,131	1,517	1,367	1,669	26.8	1,452	NA
Consumption by sector							
Electric power	1,039	1,411	1,296	1,529	25.1	1,361	NA
Coke plants	23	21	18	24	NA	22	NA
Coal-to-liquids	NA	82	41	110	NA	NA	NA
Other industrial/buildings	66	68	65	71	2.0 ^b	68	NA
Total	1,128	1,582	1,420	1,734	27.1	1,452	NA
Net coal exports	21.1	-52.4	-39.7	-50.8	-0.3	-9.8	NA
Exports	49.9	26.6	35.1	26.6	NA	49.0	NA
Imports	28.8	79.0	74.8	77.4	NA	58.8	NA
Minemouth price							
(2005 dollars per short ton)	23.34	21.55	20.96	22.68	NA	23.77	25.62 ^c
(2005 dollars per million Btu)	1.15	1.09	1.06	1.15	NA	1.18	1.28 ^c
Average delivered price to electricity generators							
(2005 dollars per short ton)	30.83	32.20	30.92	33.39	NA	33.81 ^d	39.08 ^c
(2005 dollars per million Btu)	1.53	1.63	1.57	1.69	1.35	1.68 ^c	1.96 ^c

Btu = British thermal unit. NA = Not available. See notes and sources at end of table.

Table 24. Comparison of coal projections, 2015, 2025, and 2030 (continued)
(million short tons, except where noted)

Projection	2005	AEO2007			Other projections		
		Reference	Low economic growth	High economic growth	GII ^a	EVA	Hill
2030							
Production	1.131	1.691	1.501	1.861	28.3	NA	NA
Consumption by sector							
Electric power	1.039	1.570	1.393	1.712	26.7	NA	NA
Coke plants	23	21	16	25	NA	NA	NA
Coal-to-liquids	NA	112	100	130	NA	NA	NA
Other industrial/buildings	66	69	64	73	1.9 ^b	NA	NA
Total	1.128	1.772	1.573	1.939	28.7	NA	NA
Net coal exports	21.1	-67.8	-59.7	-62.9	-0.4	NA	NA
Exports	49.9	27.2	25.8	26.4	NA	NA	NA
Imports	28.8	94.9	85.4	89.4	NA	NA	NA
Minemouth price							
(2005 dollars per short ton)	23.34	22.60	20.99	23.64	NA	NA	NA
(2005 dollars per million Btu)	1.15	1.15	1.07	1.20	NA	NA	NA
Average delivered price to electricity generators							
(2005 dollars per short ton)	30.83	33.52	31.69	34.57	NA	NA	NA
(2005 dollars per million Btu)	1.53	1.69	1.60	1.74	1.34	NA	NA

Btu = British thermal unit. NA = Not available.

^aCoal quantities provided in quadrillion Btu.

^bIncludes coal consumption at coke plants.

^cConverted from 2006 dollars to 2005 dollars to be consistent with AEO2007.

^dCalculated by multiplying the delivered price of coal to the electric power sector in dollars per million Btu by the average heat content of coal delivered to the electric power sector.

Sources: **2005 and AEO2007:** AEO2007 National Energy Modeling System, runs AEO2007.D112106A (reference case), LM2007.D112106A (low economic growth case), and HM2007.D112106A (high economic growth case). **GII:** Global Insight, Inc., *Preliminary 2006 U.S. Energy Outlook* (November 2006). **EVA:** Energy Ventures Analysis, Inc., *FUELCAST: Long-Term Outlook* (August 2006). **Hill:** Hill & Associates, Inc., *2006 Outlook for U.S. Steam Coal Long-Term Forecast* (November 2006).