

Economic Growth Case Comparisons

Table B1. Total Energy Supply and Disposition Summary
(Quadrillion Btu per Year, Unless Otherwise Noted)

Supply, Disposition, and Prices	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Production										
Crude Oil and Lease Condensate . . .	12.45	10.75	10.90	11.03	10.45	10.76	11.06	10.30	10.69	11.13
Natural Gas Plant Liquids	2.62	3.21	3.33	3.47	3.51	3.73	3.95	3.78	4.10	4.29
Dry Natural Gas	19.16	22.85	23.74	24.79	25.27	26.92	28.59	27.44	29.79	31.17
Coal	23.09	25.45	26.06	26.85	25.69	26.42	27.47	25.97	26.95	29.42
Nuclear Power	7.79	7.69	7.69	7.69	6.74	6.82	6.94	5.91	6.13	6.31
Renewable Energy ¹	6.58	7.54	7.82	7.96	7.74	8.12	8.36	7.91	8.31	8.75
Other ²	1.65	0.31	0.30	0.47	0.31	0.32	0.32	0.32	0.34	0.34
Total	73.35	77.79	79.85	82.26	79.72	83.10	86.68	81.64	86.30	91.40
Imports										
Crude Oil ³	18.96	24.25	25.15	26.20	25.70	25.94	26.63	26.43	26.44	27.21
Petroleum Products ⁴	4.14	6.01	6.49	7.23	6.64	8.46	10.09	7.66	10.69	13.46
Natural Gas	3.63	5.48	5.61	5.78	6.01	6.17	6.29	6.35	6.58	6.60
Other Imports ⁵	0.62	0.87	0.89	0.95	0.84	0.88	0.95	0.88	0.94	1.05
Total	27.35	36.61	38.14	40.16	39.19	41.44	43.96	41.33	44.64	48.31
Exports										
Petroleum ⁶	1.98	1.81	1.78	1.82	1.82	1.83	1.87	1.90	1.91	1.91
Natural Gas	0.17	0.43	0.43	0.43	0.53	0.53	0.53	0.63	0.63	0.63
Coal	1.48	1.45	1.46	1.46	1.35	1.35	1.36	1.41	1.41	1.41
Total	3.62	3.70	3.67	3.70	3.71	3.72	3.76	3.94	3.95	3.95
Discrepancy⁷	0.94	0.26	0.18	0.16	0.17	0.07	-0.00	0.05	-0.04	-0.10
Consumption										
Petroleum Products ⁸	38.03	42.71	44.41	46.62	44.81	47.50	50.40	46.73	50.59	54.82
Natural Gas	21.95	27.73	28.75	29.97	30.59	32.39	34.18	33.00	35.57	36.97
Coal	21.43	24.47	25.15	25.99	24.91	25.68	26.77	25.19	26.20	28.77
Nuclear Power	7.79	7.69	7.69	7.69	6.74	6.82	6.94	5.91	6.13	6.31
Renewable Energy ¹	6.59	7.54	7.83	7.96	7.75	8.13	8.37	7.92	8.31	8.76
Other ⁹	0.34	0.31	0.31	0.31	0.23	0.23	0.23	0.23	0.23	0.23
Total	96.14	110.45	114.14	118.55	115.03	120.75	126.88	118.98	127.03	135.86
Net Imports - Petroleum	21.12	28.45	29.86	31.62	30.52	32.57	34.85	32.18	35.22	38.76
Prices (1999 dollars per unit)										
World Oil Price (dollars per barrel) ¹⁰ . .	17.35	20.70	21.37	21.87	20.93	21.89	22.70	21.16	22.41	23.51
Gas Wellhead Price (dollars per Mcf) ¹¹	2.08	2.49	2.69	3.08	2.59	2.83	3.20	2.66	3.13	3.68
Coal Minemouth Price (dollars per ton)	16.98	13.74	13.83	13.93	13.23	13.38	13.28	12.79	12.70	12.80
Average Electric Price (cents per Kwh)	6.7	5.7	5.9	6.1	5.7	5.9	6.1	5.6	6.0	6.4

¹Includes grid-connected electricity from conventional hydroelectric; wood and wood waste; landfill gas; municipal solid waste; other biomass; wind; photovoltaic and solar thermal sources; non-electric energy from renewable sources, such as active and passive solar systems, and wood; and both the ethanol and gasoline components of E85, but not the ethanol components of blends less than 85 percent. Excludes electricity imports using renewable sources and nonmarketed renewable energy. See Table B18 for selected nonmarketed residential and commercial renewable energy.

²Includes liquid hydrogen, methanol, supplemental natural gas, and some domestic inputs to refineries.

³Includes imports of crude oil for the Strategic Petroleum Reserve.

⁴Includes imports of finished petroleum products, imports of unfinished oils, alcohols, ethers, and blending components.

⁵Includes coal, coal coke (net), and electricity (net).

⁶Includes crude oil and petroleum products.

⁷Balancing item. Includes unaccounted for supply, losses, gains, and net storage withdrawals.

⁸Includes natural gas plant liquids, crude oil consumed as a fuel, and nonpetroleum based liquids for blending, such as ethanol.

⁹Includes net electricity imports, methanol, and liquid hydrogen.

¹⁰Average refiner acquisition cost for imported crude oil.

¹¹Represents lower 48 onshore and offshore supplies.

Btu = British thermal unit.

Mcf = Thousand cubic feet.

Kwh = Kilowatt-hour.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999 natural gas values: Energy Information Administration (EIA), *Natural Gas Monthly*, DOE/EIA-0130(2000/06) (Washington, DC, June 2000). 1999 petroleum values: EIA, *Petroleum Supply Annual 1999*, DOE/EIA-0340(99/1) (Washington, DC, June 2000). Other 1999 values: EIA, *Annual Energy Review 1999*, DOE/EIA-0384(99) (Washington, DC, July 2000) and EIA, *Quarterly Coal Report*, DOE/EIA-0121(2000/1Q) (Washington, DC, August 2000). Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, AND HM2001.D101600A.

Economic Growth Case Comparisons

Table B2. Energy Consumption by Sector and Source
(Quadrillion Btu per Year, Unless Otherwise Noted)

Sector and Source	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Energy Consumption										
Residential										
Distillate Fuel	0.86	0.81	0.81	0.81	0.78	0.77	0.77	0.76	0.75	0.75
Kerosene	0.10	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Liquefied Petroleum Gas	0.46	0.42	0.41	0.41	0.40	0.40	0.40	0.40	0.39	0.39
Petroleum Subtotal	1.42	1.30	1.29	1.29	1.25	1.24	1.24	1.22	1.21	1.21
Natural Gas	4.85	5.64	5.69	5.71	5.86	5.99	6.06	6.11	6.30	6.38
Coal	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Renewable Energy ¹	0.41	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44
Electricity	3.91	4.89	4.96	5.01	5.25	5.37	5.46	5.61	5.80	5.92
Delivered Energy	10.62	12.31	12.43	12.49	12.84	13.08	13.24	13.43	13.81	14.00
Electricity Related Losses	8.48	9.77	9.87	9.84	10.07	10.19	10.18	10.37	10.55	10.58
Total	19.10	22.08	22.30	22.34	22.91	23.27	23.42	23.81	24.36	24.59
Commercial										
Distillate Fuel	0.36	0.40	0.41	0.42	0.40	0.40	0.42	0.38	0.39	0.41
Residual Fuel	0.10	0.10	0.11	0.11	0.10	0.11	0.11	0.10	0.11	0.11
Kerosene	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Liquefied Petroleum Gas	0.08	0.09	0.09	0.10	0.09	0.10	0.10	0.09	0.10	0.10
Motor Gasoline ²	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Petroleum Subtotal	0.59	0.65	0.67	0.68	0.65	0.67	0.69	0.63	0.66	0.69
Natural Gas	3.15	3.79	3.88	3.94	3.90	4.05	4.18	3.93	4.13	4.30
Coal	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.07	0.08	0.08
Renewable Energy ³	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Electricity	3.70	4.74	4.89	5.02	5.09	5.32	5.56	5.28	5.61	5.95
Delivered Energy	7.59	9.33	9.59	9.80	9.79	10.19	10.59	10.01	10.55	11.10
Electricity Related Losses	8.01	9.46	9.71	9.87	9.74	10.10	10.36	9.76	10.20	10.63
Total	15.61	18.79	19.30	19.67	19.53	20.29	20.95	19.77	20.75	21.73
Industrial⁴										
Distillate Fuel	1.07	1.19	1.27	1.35	1.24	1.35	1.46	1.28	1.44	1.61
Liquefied Petroleum Gas	2.32	2.36	2.50	2.73	2.43	2.65	2.93	2.49	2.83	3.25
Petrochemical Feedstock	1.29	1.44	1.53	1.67	1.47	1.61	1.78	1.49	1.70	1.94
Residual Fuel	0.22	0.24	0.25	0.27	0.24	0.26	0.28	0.25	0.27	0.31
Motor Gasoline ²	0.21	0.23	0.25	0.26	0.24	0.26	0.28	0.25	0.28	0.31
Other Petroleum ⁵	4.29	4.55	4.76	5.08	4.65	5.01	5.37	4.82	5.24	5.77
Petroleum Subtotal	9.39	10.01	10.55	11.35	10.28	11.14	12.11	10.58	11.77	13.19
Natural Gas ⁶	9.43	10.68	11.11	11.70	11.07	11.76	12.59	11.38	12.34	13.46
Metallurgical Coal	0.75	0.61	0.61	0.61	0.55	0.55	0.55	0.50	0.50	0.50
Steam Coal	1.73	1.82	1.85	1.91	1.82	1.87	1.94	1.82	1.90	1.99
Net Coal Coke Imports	0.06	0.13	0.16	0.21	0.15	0.19	0.27	0.17	0.22	0.33
Coal Subtotal	2.54	2.55	2.62	2.73	2.52	2.61	2.76	2.49	2.62	2.83
Renewable Energy ⁷	2.15	2.52	2.64	2.82	2.66	2.86	3.10	2.78	3.08	3.44
Electricity	3.63	3.97	4.18	4.53	4.14	4.47	4.92	4.35	4.81	5.47
Delivered Energy	27.15	29.73	31.10	33.12	30.68	32.84	35.48	31.59	34.63	38.39
Electricity Related Losses	7.87	7.93	8.32	8.90	7.94	8.48	9.18	8.04	8.76	9.78
Total	35.02	37.66	39.42	42.02	38.62	41.31	44.66	39.63	43.39	48.17

Economic Growth Case Comparisons

Table B2. Energy Consumption by Sector and Source (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Sector and Source	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Transportation										
Distillate Fuel	5.13	6.63	6.99	7.45	7.05	7.60	8.23	7.44	8.21	9.14
Jet Fuel ⁸	3.46	4.27	4.51	4.80	4.81	5.22	5.63	5.32	5.97	6.59
Motor Gasoline ²	15.92	18.50	19.04	19.62	19.40	20.23	21.05	20.14	21.32	22.46
Residual Fuel	0.74	0.85	0.85	0.86	0.85	0.86	0.87	0.85	0.87	0.88
Liquefied Petroleum Gas	0.02	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06
Other Petroleum ⁹	0.26	0.29	0.31	0.32	0.31	0.33	0.35	0.32	0.35	0.39
Petroleum Subtotal	25.54	30.59	31.74	33.10	32.47	34.28	36.19	34.12	36.77	39.52
Pipeline Fuel Natural Gas	0.66	0.87	0.90	0.93	0.94	0.99	1.05	1.00	1.09	1.15
Compressed Natural Gas	0.02	0.09	0.09	0.10	0.12	0.13	0.14	0.15	0.16	0.17
Renewable Energy (E85) ¹⁰	0.01	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05
Methanol (M85) ¹¹	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Liquid Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.06	0.12	0.12	0.12	0.14	0.15	0.15	0.16	0.17	0.17
Delivered Energy	26.28	31.69	32.89	34.29	33.71	35.60	37.57	35.48	38.23	41.06
Electricity Related Losses	0.13	0.23	0.23	0.24	0.27	0.28	0.28	0.29	0.30	0.31
Total	26.41	31.92	33.12	34.53	33.98	35.87	37.85	35.77	38.54	41.37
Delivered Energy Consumption for All Sectors										
Distillate Fuel	7.42	9.03	9.47	10.03	9.47	10.12	10.89	9.86	10.80	11.91
Kerosene	0.15	0.13	0.13	0.13	0.12	0.13	0.13	0.12	0.12	0.13
Jet Fuel ⁸	3.46	4.27	4.51	4.80	4.81	5.22	5.63	5.32	5.97	6.59
Liquefied Petroleum Gas	2.88	2.91	3.05	3.28	2.98	3.20	3.49	3.04	3.38	3.81
Motor Gasoline ²	16.17	18.76	19.31	19.91	19.67	20.52	21.36	20.42	21.63	22.80
Petrochemical Feedstock	1.29	1.44	1.53	1.67	1.47	1.61	1.78	1.49	1.70	1.94
Residual Fuel	1.05	1.19	1.21	1.23	1.20	1.22	1.26	1.20	1.25	1.30
Other Petroleum ¹²	4.53	4.82	5.04	5.38	4.94	5.31	5.69	5.12	5.57	6.13
Petroleum Subtotal	36.95	42.55	44.25	46.43	44.65	47.33	50.23	46.56	50.41	54.61
Natural Gas ⁶	18.11	21.06	21.68	22.38	21.88	22.91	24.02	22.58	24.02	25.46
Metallurgical Coal	0.75	0.61	0.61	0.61	0.55	0.55	0.55	0.50	0.50	0.50
Steam Coal	1.84	1.94	1.98	2.03	1.94	1.99	2.06	1.94	2.02	2.12
Net Coal Coke Imports	0.06	0.13	0.16	0.21	0.15	0.19	0.27	0.17	0.22	0.33
Coal Subtotal	2.65	2.67	2.74	2.85	2.64	2.74	2.88	2.61	2.74	2.95
Renewable Energy ¹³	2.65	3.06	3.19	3.37	3.21	3.42	3.66	3.34	3.65	4.01
Methanol (M85) ¹¹	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Liquid Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	11.29	13.72	14.15	14.67	14.62	15.30	16.09	15.41	16.39	17.52
Delivered Energy	71.65	83.07	86.01	89.70	87.01	91.71	96.88	90.51	97.22	104.56
Electricity Related Losses	24.49	27.38	28.13	28.85	28.02	29.04	30.00	28.47	29.81	31.30
Total	96.14	110.45	114.14	118.55	115.03	120.75	126.88	118.98	127.03	135.86
Electric Generators¹⁴										
Distillate Fuel	0.06	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Residual Fuel	1.03	0.12	0.12	0.15	0.12	0.12	0.13	0.12	0.14	0.17
Petroleum Subtotal	1.08	0.16	0.16	0.19	0.16	0.16	0.17	0.16	0.18	0.21
Natural Gas	3.85	6.66	7.07	7.59	8.70	9.48	10.16	10.42	11.55	11.51
Steam Coal	18.78	21.79	22.41	23.14	22.27	22.94	23.89	22.58	23.46	25.82
Nuclear Power	7.79	7.69	7.69	7.69	6.74	6.82	6.94	5.91	6.13	6.31
Renewable Energy ¹⁵	3.94	4.48	4.64	4.59	4.54	4.71	4.71	4.58	4.66	4.75
Electricity Imports ¹⁶	0.34	0.31	0.31	0.31	0.22	0.22	0.22	0.22	0.22	0.22
Total	35.78	41.10	42.28	43.52	42.64	44.34	46.09	43.88	46.20	48.82

Economic Growth Case Comparisons

Table B2. Energy Consumption by Sector and Source (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Sector and Source	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Total Energy Consumption										
Distillate Fuel	7.48	9.07	9.51	10.07	9.51	10.17	10.92	9.90	10.84	11.95
Kerosene	0.15	0.13	0.13	0.13	0.12	0.13	0.13	0.12	0.12	0.13
Jet Fuel ⁸	3.46	4.27	4.51	4.80	4.81	5.22	5.63	5.32	5.97	6.59
Liquefied Petroleum Gas	2.88	2.91	3.05	3.28	2.98	3.20	3.49	3.04	3.38	3.81
Motor Gasoline ²	16.17	18.76	19.31	19.91	19.67	20.52	21.36	20.42	21.63	22.80
Petrochemical Feedstock	1.29	1.44	1.53	1.67	1.47	1.61	1.78	1.49	1.70	1.94
Residual Fuel	2.08	1.31	1.33	1.39	1.32	1.35	1.39	1.33	1.38	1.47
Other Petroleum ¹²	4.53	4.82	5.04	5.38	4.94	5.31	5.69	5.12	5.57	6.13
Petroleum Subtotal	38.03	42.71	44.41	46.62	44.81	47.50	50.40	46.73	50.59	54.82
Natural Gas	21.95	27.73	28.75	29.97	30.59	32.39	34.18	33.00	35.57	36.97
Metallurgical Coal	0.75	0.61	0.61	0.61	0.55	0.55	0.55	0.50	0.50	0.50
Steam Coal	20.62	23.73	24.39	25.17	24.21	24.93	25.95	24.52	25.48	27.94
Net Coal Coke Imports	0.06	0.13	0.16	0.21	0.15	0.19	0.27	0.17	0.22	0.33
Coal Subtotal	21.43	24.47	25.15	25.99	24.91	25.68	26.77	25.19	26.20	28.77
Nuclear Power	7.79	7.69	7.69	7.69	6.74	6.82	6.94	5.91	6.13	6.31
Renewable Energy ¹⁷	6.59	7.54	7.83	7.96	7.75	8.13	8.37	7.92	8.31	8.76
Methanol (M85) ¹¹	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Liquid Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity Imports ¹⁶	0.34	0.31	0.31	0.31	0.22	0.22	0.22	0.22	0.22	0.22
Total	96.14	110.45	114.14	118.55	115.03	120.75	126.89	118.98	127.04	135.86
Energy Use and Related Statistics										
Delivered Energy Use	71.65	83.07	86.01	89.70	87.01	91.71	96.88	90.51	97.22	104.56
Total Energy Use	96.14	110.45	114.14	118.55	115.03	120.75	126.89	118.98	127.04	135.86
Population (millions)	273.13	292.66	300.17	307.68	301.58	312.58	323.58	310.66	325.24	339.82
Gross Domestic Product (billion 1996 dollars)	8,876	12,000	12,667	13,463	13,495	14,635	15,744	14,757	16,515	18,202
Carbon Dioxide Emissions (million metric tons carbon equivalent)	1,510.8	1,750.0	1,809.1	1,882.6	1,840.1	1,928.1	2,027.6	1,916.4	2,040.6	2,193.3

¹Includes wood used for residential heating. See Table B18 estimates of nonmarketed renewable energy consumption for geothermal heat pumps, solar thermal hot water heating, and solar photovoltaic electricity generation.

²Includes ethanol (blends of 10 percent or less) and ethers blended into gasoline.

³Includes commercial sector electricity cogenerated by using wood and wood waste, landfill gas, municipal solid waste, and other biomass. See Table B18 for estimates of nonmarketed renewable energy consumption for solar thermal hot water heating and solar photovoltaic electricity generation.

⁴Fuel consumption includes consumption for cogeneration, which produces electricity and other useful thermal energy.

⁵Includes petroleum coke, asphalt, road oil, lubricants, still gas, and miscellaneous petroleum products.

⁶Includes lease and plant fuel and consumption by cogenerators; excludes consumption by nonutility generators.

⁷Includes consumption of energy from hydroelectric, wood and wood waste, municipal solid waste, and other biomass; includes cogeneration, both for sale to the grid and for own use.

⁸Includes only kerosene type.

⁹Includes aviation gas and lubricants.

¹⁰E85 is 85 percent ethanol (renewable) and 15 percent motor gasoline (nonrenewable).

¹¹M85 is 85 percent methanol and 15 percent motor gasoline.

¹²Includes unfinished oils, natural gasoline, motor gasoline blending compounds, aviation gasoline, lubricants, still gas, asphalt, road oil, petroleum coke, and miscellaneous petroleum products.

¹³Includes electricity generated for sale to the grid and for own use from renewable sources, and non-electric energy from renewable sources. Excludes nonmarketed renewable energy consumption for geothermal heat pumps, buildings photovoltaic systems, and solar thermal hot water heaters.

¹⁴Includes consumption of energy by all electric power generators for grid-connected power except cogenerators, which produce electricity and other useful thermal energy. Includes small power producers and exempt wholesale generators.

¹⁵Includes conventional hydroelectric, geothermal, wood and wood waste, municipal solid waste, other biomass, petroleum coke, wind, photovoltaic and solar thermal sources. Excludes cogeneration. Excludes net electricity imports.

¹⁶In 1998 approximately 70 percent of the U.S. electricity imports were provided by renewable sources (hydroelectricity); EIA does not project future proportions for the fuel source of imported electricity.

¹⁷Includes hydroelectric, geothermal, wood and wood waste, municipal solid waste, other biomass, wind, photovoltaic and solar thermal sources. Includes ethanol components of E85; excludes ethanol blends (10 percent or less) in motor gasoline. Excludes net electricity imports and nonmarketed renewable energy consumption for geothermal heat pumps, buildings photovoltaic systems, and solar thermal hot water heaters.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports. Consumption values of 0.00 are values that round to 0.00, because they are less than 0.005.

Sources: 1999 electric utility fuel consumption: Energy Information Administration (EIA), *Electric Power Annual 1998, Volume 1*, DOE/EIA-0348(98)/1 (Washington, DC, April 1999). 1999 nonutility consumption estimates: EIA, Form EIA-860B: "Annual Electric Generator Report - Nonutility." Other 1999 values: EIA, *Short-Term Energy Outlook, September 2000*, <http://www.eia.doe.gov/pub/forecasting/steo/oldsteos/sep00.pdf>. Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B3. Energy Prices by Sector and Source
(1999 Dollars per Million Btu, Unless Otherwise Noted)

Sector and Source	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Residential	13.17	12.81	13.16	13.75	12.78	13.33	13.88	12.82	13.59	14.39
Primary Energy ¹	6.72	6.80	7.01	7.33	6.67	6.92	7.23	6.61	7.01	7.47
Petroleum Products ²	7.55	9.05	9.37	9.45	9.06	9.49	9.71	9.08	9.64	9.92
Distillate Fuel	6.27	7.31	7.51	7.63	7.40	7.80	7.99	7.49	7.98	8.18
Liquefied Petroleum Gas	10.36	12.47	13.07	13.05	12.30	12.83	13.07	12.18	12.87	13.31
Natural Gas	6.52	6.33	6.53	6.91	6.21	6.44	6.77	6.15	6.55	7.05
Electricity	23.60	21.39	21.88	22.81	21.10	22.01	22.85	20.99	22.17	23.32
Commercial	13.25	11.34	11.75	12.51	11.31	11.96	12.68	11.41	12.37	13.46
Primary Energy ¹	5.22	5.34	5.53	5.86	5.30	5.55	5.86	5.32	5.74	6.21
Petroleum Products ²	5.00	5.93	6.17	6.27	5.97	6.34	6.52	6.02	6.50	6.77
Distillate Fuel	4.37	5.09	5.28	5.40	5.17	5.55	5.75	5.25	5.75	6.01
Residual Fuel	2.63	3.59	3.69	3.77	3.62	3.77	3.90	3.65	3.85	4.02
Natural Gas ³	5.34	5.31	5.50	5.87	5.26	5.50	5.84	5.28	5.71	6.22
Electricity	21.54	17.05	17.63	18.74	16.77	17.72	18.75	16.76	18.12	19.63
Industrial⁴	5.33	5.16	5.45	5.76	5.19	5.56	5.93	5.26	5.85	6.40
Primary Energy	3.92	4.12	4.38	4.60	4.16	4.48	4.76	4.21	4.72	5.14
Petroleum Products ²	5.55	5.70	6.05	6.13	5.71	6.10	6.32	5.70	6.27	6.59
Distillate Fuel	4.65	5.26	5.45	5.58	5.35	5.73	5.93	5.44	5.94	6.28
Liquefied Petroleum Gas	8.50	7.39	8.01	7.99	7.26	7.75	7.97	7.15	7.83	8.27
Residual Fuel	2.78	3.32	3.42	3.50	3.35	3.50	3.62	3.39	3.58	3.75
Natural Gas ⁵	2.79	3.12	3.31	3.68	3.20	3.45	3.81	3.29	3.76	4.31
Metallurgical Coal	1.65	1.53	1.54	1.55	1.47	1.49	1.50	1.43	1.44	1.46
Steam Coal	1.43	1.28	1.29	1.31	1.24	1.25	1.27	1.19	1.21	1.24
Electricity	13.09	10.86	11.24	11.92	10.67	11.27	11.97	10.69	11.62	12.67
Transportation	8.30	9.19	9.46	9.75	9.03	9.38	9.68	8.92	9.31	9.67
Primary Energy	8.29	9.17	9.45	9.74	9.01	9.36	9.66	8.90	9.29	9.65
Petroleum Products ²	8.28	9.17	9.44	9.74	9.01	9.36	9.66	8.90	9.29	9.65
Distillate Fuel ⁶	8.22	8.65	8.94	9.20	8.60	9.05	9.34	8.50	8.98	9.48
Jet Fuel ⁷	4.70	5.24	5.47	5.63	5.30	5.75	6.02	5.44	5.88	6.09
Motor Gasoline ⁸	9.45	10.62	10.93	11.31	10.42	10.75	11.10	10.27	10.68	11.08
Residual Fuel	2.46	3.07	3.18	3.25	3.10	3.25	3.38	3.13	3.33	3.50
Liquefied Petroleum Gas ⁹	12.87	13.65	14.26	14.34	13.38	13.96	14.32	13.08	13.84	14.42
Natural Gas ¹⁰	7.02	6.76	7.04	7.53	6.81	7.17	7.63	6.77	7.32	7.96
Ethanol (E85) ¹¹	14.42	19.03	19.00	19.19	19.30	19.24	19.40	18.46	19.36	19.57
Methanol (M85) ¹²	10.38	13.50	13.74	14.03	13.99	14.33	14.65	13.92	14.43	14.85
Electricity	15.57	13.39	13.47	14.01	12.78	13.21	13.64	12.58	13.06	13.59
Average End-Use Energy	8.55	8.67	8.95	9.29	8.64	9.01	9.37	8.65	9.17	9.66
Primary Energy	6.33	6.93	7.18	7.44	6.89	7.21	7.49	6.88	7.30	7.68
Electricity	19.50	16.78	17.20	17.98	16.56	17.30	18.02	16.54	17.59	18.64
Electric Generators¹³										
Fossil Fuel Average	1.49	1.48	1.54	1.66	1.57	1.68	1.82	1.65	1.86	1.97
Petroleum Products	2.50	3.98	4.11	4.08	4.06	4.27	4.37	4.12	4.35	4.43
Distillate Fuel	4.05	4.65	4.84	4.97	4.74	5.10	5.30	4.82	5.28	5.63
Residual Fuel	2.42	3.77	3.88	3.86	3.84	4.00	4.10	3.90	4.07	4.15
Natural Gas	2.55	2.84	3.03	3.38	2.99	3.24	3.60	3.11	3.59	4.09
Steam Coal	1.21	1.04	1.05	1.07	1.00	1.01	1.04	0.96	0.98	1.01

Economic Growth Case Comparisons

Table B3. Energy Prices by Sector and Source (Continued)
(1999 Dollars per Million Btu, Unless Otherwise Noted)

Sector and Source	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Average Price to All Users¹⁴										
Petroleum Products ²	7.44	8.35	8.64	8.85	8.26	8.61	8.86	8.19	8.61	8.93
Distillate Fuel	7.27	7.91	8.18	8.42	7.92	8.36	8.63	7.89	8.38	8.83
Jet Fuel	4.70	5.24	5.47	5.63	5.30	5.75	6.02	5.44	5.88	6.09
Liquefied Petroleum Gas	8.84	8.31	8.88	8.81	8.14	8.58	8.75	8.02	8.62	8.98
Motor Gasoline ⁸	9.45	10.62	10.93	11.31	10.42	10.75	11.10	10.27	10.68	11.08
Residual Fuel	2.48	3.22	3.33	3.41	3.26	3.41	3.54	3.29	3.49	3.67
Natural Gas	4.05	4.10	4.27	4.60	4.07	4.28	4.60	4.08	4.50	5.01
Coal	1.23	1.06	1.07	1.09	1.02	1.03	1.06	0.98	1.00	1.03
Ethanol (E85) ¹¹	14.42	19.03	19.00	19.19	19.30	19.24	19.40	18.46	19.36	19.57
Methanol (M85) ¹²	10.38	13.50	13.74	14.03	13.99	14.33	14.65	13.92	14.43	14.85
Electricity	19.50	16.78	17.20	17.98	16.56	17.30	18.02	16.54	17.59	18.64
Non-Renewable Energy Expenditures by Sector (billion 1999 dollars)										
Residential	134.60	152.22	157.93	165.91	158.61	168.52	177.83	166.63	181.70	195.18
Commercial	99.50	104.86	111.72	121.54	109.78	120.89	133.25	113.21	129.51	148.31
Industrial	110.90	114.35	126.53	143.40	118.15	135.93	158.05	122.76	150.97	185.59
Transportation	212.63	282.57	302.06	324.75	295.27	323.87	352.66	306.62	344.96	385.10
Total Non-Renewable Expenditures	557.64	654.00	698.23	755.60	681.81	749.21	821.79	709.23	807.14	914.18
Transportation Renewable Expenditures	0.14	0.57	0.61	0.67	0.69	0.75	0.82	0.74	0.86	0.95
Total Expenditures	557.78	654.57	698.85	756.27	682.50	749.96	822.60	709.96	808.00	915.13

¹Weighted average price includes fuels below as well as coal.

²This quantity is the weighted average for all petroleum products, not just those listed below.

³Excludes independent power producers.

⁴Includes cogenerators.

⁵Excludes uses for lease and plant fuel.

⁶Low sulfur diesel fuel. Price includes Federal and State taxes while excluding county and local taxes.

⁷Kerosene-type jet fuel. Price includes Federal and State taxes while excluding county and local taxes.

⁸Sales weighted-average price for all grades. Includes Federal and State taxes and excludes county and local taxes.

⁹Includes Federal and State taxes while excluding county and local taxes.

¹⁰Compressed natural gas used as a vehicle fuel. Price includes estimated motor vehicle fuel taxes.

¹¹E85 is 85 percent ethanol (renewable) and 15 percent motor gasoline (nonrenewable).

¹²M85 is 85 percent methanol and 15 percent motor gasoline.

¹³Includes all electric power generators except cogenerators, which produce electricity and other useful thermal energy. Includes small power producers and exempt wholesale generators.

¹⁴Weighted averages of end-use fuel prices are derived from the prices shown in each sector and the corresponding sectoral consumption.

Btu = British thermal unit.

Note: Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999 prices for gasoline, distillate, and jet fuel are based on prices in various issues of Energy Information Administration (EIA), *Petroleum Marketing Monthly*, DOE/EIA-0380(99/03-2000/04) (Washington, DC, 1999-2000). 1999 prices for all other petroleum products are derived from the EIA, *State Energy Price and Expenditure Report 1997*, DOE/EIA-0376(97) (Washington, DC, July 2000). 1999 industrial gas delivered prices are based on EIA, *Manufacturing Energy Consumption Survey 1994*. 1999 residential and commercial natural gas delivered prices: EIA, *Natural Gas Monthly*, DOE/EIA-0130(2000/06) (Washington, DC, June 2000). 1999 coal prices based on EIA, *Quarterly Coal Report*, DOE/EIA-0121(2000/1Q) (Washington, DC, August 2000) and EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A. 1999 electricity prices for commercial, industrial, and transportation: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A. **Projections:** EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B4. Residential Sector Key Indicators and End-Use Consumption
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Key Indicators										
Households (millions)										
Single-Family	75.70	84.14	85.51	86.89	87.41	89.93	91.94	90.44	94.36	97.09
Multifamily	21.79	23.80	24.25	25.01	24.93	25.69	26.78	25.94	27.09	28.56
Mobile Homes	6.59	7.09	7.20	7.29	7.36	7.57	7.64	7.63	7.96	8.02
Total	104.08	115.04	116.97	119.19	119.70	123.20	126.36	124.01	129.41	133.68
Average House Square Footage	1673	1720	1724	1725	1737	1744	1746	1754	1763	1766
Energy Intensity										
(million Btu per household)										
Delivered Energy Consumption	102.1	107.0	106.3	104.8	107.3	106.2	104.8	108.3	106.7	104.8
Total Energy Consumption	183.5	191.9	190.6	187.4	191.4	188.9	185.4	192.0	188.3	183.9
(thousand Btu per square foot)										
Delivered Energy Consumption	61.0	62.2	61.7	60.8	61.7	60.9	60.0	61.8	60.5	59.3
Total Energy Consumption	109.7	111.6	110.6	108.6	110.2	108.3	106.2	109.5	106.8	104.2
Delivered Energy Consumption by Fuel										
Electricity										
Space Heating	0.38	0.46	0.47	0.47	0.48	0.49	0.50	0.49	0.51	0.52
Space Cooling	0.52	0.62	0.63	0.63	0.68	0.69	0.71	0.74	0.77	0.79
Water Heating	0.39	0.43	0.43	0.43	0.43	0.43	0.44	0.42	0.43	0.44
Refrigeration	0.43	0.34	0.34	0.35	0.32	0.32	0.33	0.31	0.33	0.34
Cooking	0.10	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.14
Clothes Dryers	0.22	0.26	0.26	0.26	0.27	0.27	0.28	0.28	0.29	0.29
Freezers	0.12	0.09	0.09	0.09	0.08	0.09	0.09	0.08	0.09	0.09
Lighting	0.34	0.46	0.46	0.46	0.49	0.49	0.49	0.51	0.52	0.52
Clothes Washers ¹	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Dishwashers ¹	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03
Color Televisions	0.12	0.19	0.19	0.19	0.21	0.21	0.22	0.23	0.24	0.24
Personal Computers	0.06	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.11	0.12
Furnace Fans	0.07	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.12	0.12
Other Uses ²	1.10	1.71	1.73	1.75	1.93	1.97	2.01	2.13	2.20	2.25
Delivered Energy	3.91	4.89	4.96	5.01	5.25	5.37	5.46	5.61	5.80	5.92
Natural Gas										
Space Heating	3.22	3.81	3.85	3.86	3.97	4.06	4.11	4.17	4.31	4.36
Space Cooling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Heating	1.26	1.40	1.41	1.42	1.44	1.47	1.49	1.47	1.52	1.54
Cooking	0.19	0.22	0.23	0.23	0.24	0.24	0.24	0.25	0.25	0.26
Clothes Dryers	0.07	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.11	0.11
Other Uses ³	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Delivered Energy	4.85	5.64	5.69	5.71	5.86	5.99	6.06	6.11	6.30	6.38
Distillate										
Space Heating	0.73	0.69	0.69	0.69	0.67	0.66	0.66	0.65	0.65	0.65
Water Heating	0.13	0.12	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.10
Other Uses ⁴	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivered Energy	0.86	0.81	0.81	0.81	0.78	0.77	0.77	0.76	0.75	0.75
Liquefied Petroleum Gas										
Space Heating	0.31	0.28	0.28	0.28	0.27	0.27	0.27	0.27	0.27	0.27
Water Heating	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Cooking	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Other Uses ³	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Delivered Energy	0.46	0.42	0.41	0.41	0.40	0.40	0.40	0.40	0.39	0.39
Marketed Renewables (wood) ⁵	0.41	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44
Other Fuels ⁶	0.14	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Economic Growth Case Comparisons

Table B4. Residential Sector Key Indicators and End-Use Consumption (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Delivered Energy Consumption by End-Use										
Space Heating	5.18	5.80	5.84	5.86	5.94	6.03	6.09	6.14	6.29	6.35
Space Cooling	0.52	0.62	0.63	0.63	0.68	0.70	0.71	0.74	0.77	0.79
Water Heating	1.89	2.03	2.05	2.06	2.06	2.10	2.13	2.09	2.14	2.17
Refrigeration	0.43	0.34	0.34	0.35	0.32	0.32	0.33	0.31	0.33	0.34
Cooking	0.32	0.37	0.38	0.38	0.39	0.40	0.40	0.40	0.42	0.43
Clothes Dryers	0.28	0.34	0.35	0.35	0.37	0.37	0.38	0.39	0.40	0.40
Freezers	0.12	0.09	0.09	0.09	0.08	0.09	0.09	0.08	0.09	0.09
Lighting	0.34	0.46	0.46	0.46	0.49	0.49	0.49	0.51	0.52	0.52
Clothes Washers	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Dishwashers	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03
Color Televisions	0.12	0.19	0.19	0.19	0.21	0.21	0.22	0.23	0.24	0.24
Personal Computers	0.06	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.11	0.12
Furnace Fans	0.07	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.12	0.12
Other Uses ⁷	1.23	1.83	1.86	1.87	2.05	2.09	2.13	2.25	2.32	2.37
Delivered Energy	10.62	12.31	12.43	12.49	12.84	13.08	13.24	13.43	13.81	14.00
Electricity Related Losses	8.48	9.77	9.87	9.84	10.07	10.19	10.18	10.37	10.55	10.58
Total Energy Consumption by End-Use										
Space Heating	6.01	6.71	6.76	6.78	6.85	6.96	7.01	7.06	7.22	7.28
Space Cooling	1.64	1.85	1.87	1.88	1.97	2.01	2.03	2.11	2.17	2.19
Water Heating	2.75	2.88	2.90	2.91	2.88	2.92	2.95	2.87	2.93	2.96
Refrigeration	1.35	1.01	1.02	1.03	0.92	0.94	0.95	0.89	0.92	0.93
Cooking	0.54	0.60	0.61	0.62	0.62	0.63	0.65	0.63	0.66	0.67
Clothes Dryers	0.75	0.85	0.86	0.86	0.88	0.89	0.89	0.91	0.93	0.93
Freezers	0.37	0.26	0.27	0.27	0.24	0.25	0.25	0.24	0.25	0.25
Lighting	1.08	1.37	1.38	1.36	1.41	1.42	1.41	1.45	1.46	1.45
Clothes Washers	0.09	0.10	0.10	0.10	0.10	0.11	0.11	0.10	0.11	0.11
Dishwashers	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.07	0.08	0.08
Color Televisions	0.38	0.56	0.57	0.57	0.61	0.62	0.62	0.66	0.67	0.68
Personal Computers	0.20	0.28	0.28	0.28	0.29	0.29	0.29	0.32	0.32	0.33
Furnace Fans	0.24	0.29	0.29	0.29	0.30	0.31	0.31	0.32	0.33	0.33
Other Uses ⁷	3.62	5.24	5.30	5.31	5.75	5.84	5.87	6.18	6.32	6.39
Total	19.10	22.08	22.30	22.34	22.91	23.27	23.42	23.81	24.36	24.59
Non-Marketed Renewables										
Geothermal ⁸	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Solar ⁹	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.04	0.04

¹Does not include electric water heating portion of load.

²Includes small electric devices, heating elements, and motors.

³Includes such appliances as swimming pool heaters, outdoor grills, and outdoor lighting (natural gas).

⁴Includes such appliances as swimming pool and hot tub heaters.

⁵Includes wood used for primary and secondary heating in wood stoves or fireplaces as reported in the *Residential Energy Consumption Survey 1997*.

⁶Includes kerosene and coal.

⁷Includes all other uses listed above.

⁸Includes primary energy displaced by geothermal heat pumps in space heating and cooling applications.

⁹Includes primary energy displaced by solar thermal water heaters and electricity generated using photovoltaics.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999: Energy Information Administration (EIA), *Short-Term Energy Outlook, September 2000*, <http://www.eia.doe.gov/pub/forecasting/steo/oldsteos/sep00.pdf>.

Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B5. Commercial Sector Key Indicators and Consumption
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Key Indicators										
Total Floor Space (billion square feet)										
Surviving	60.8	71.7	74.0	76.4	74.4	78.1	82.0	75.5	80.7	86.1
New Additions	2.0	1.5	1.8	2.0	1.2	1.5	1.8	0.9	1.3	1.7
Total	62.8	73.2	75.8	78.5	75.7	79.6	83.8	76.4	81.9	87.8
Energy Consumption Intensity (thousand Btu per square foot)										
Delivered Energy Consumption	120.9	127.5	126.6	124.9	129.3	128.0	126.4	131.0	128.8	126.4
Electricity Related Losses	127.6	129.1	128.2	125.7	128.7	126.8	123.7	127.8	124.5	121.1
Total Energy Consumption	248.5	256.6	254.8	250.6	258.0	254.9	250.1	258.7	253.2	247.5
Delivered Energy Consumption by Fuel										
Purchased Electricity										
Space Heating ¹	0.14	0.16	0.16	0.17	0.16	0.16	0.17	0.15	0.16	0.17
Space Cooling ¹	0.43	0.44	0.46	0.47	0.44	0.46	0.48	0.43	0.46	0.49
Water Heating ¹	0.14	0.16	0.16	0.16	0.15	0.16	0.17	0.15	0.16	0.16
Ventilation	0.17	0.20	0.21	0.21	0.20	0.21	0.22	0.20	0.21	0.22
Cooking	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Lighting	1.21	1.38	1.42	1.46	1.42	1.48	1.54	1.41	1.47	1.55
Refrigeration	0.18	0.21	0.21	0.22	0.21	0.22	0.23	0.21	0.22	0.24
Office Equipment (PC)	0.10	0.23	0.24	0.25	0.26	0.28	0.29	0.27	0.29	0.32
Office Equipment (non-PC)	0.30	0.49	0.51	0.53	0.57	0.60	0.63	0.64	0.69	0.74
Other Uses ²	0.99	1.44	1.48	1.53	1.63	1.71	1.79	1.79	1.91	2.03
Delivered Energy	3.70	4.74	4.89	5.02	5.09	5.32	5.56	5.28	5.61	5.95
Natural Gas³										
Space Heating ¹	1.42	1.70	1.74	1.76	1.73	1.80	1.85	1.73	1.81	1.88
Space Cooling ¹	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.03	0.03
Water Heating ¹	0.64	0.74	0.77	0.79	0.78	0.82	0.86	0.79	0.84	0.89
Cooking	0.21	0.24	0.25	0.25	0.25	0.26	0.27	0.25	0.27	0.29
Other Uses ⁴	0.87	1.09	1.11	1.12	1.11	1.14	1.17	1.13	1.18	1.22
Delivered Energy	3.15	3.79	3.88	3.94	3.90	4.05	4.18	3.93	4.13	4.30
Distillate										
Space Heating ¹	0.23	0.25	0.25	0.26	0.24	0.25	0.26	0.23	0.24	0.25
Water Heating ¹	0.09	0.08	0.09	0.09	0.08	0.08	0.09	0.08	0.08	0.09
Other Uses ⁵	0.04	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Delivered Energy	0.36	0.40	0.41	0.42	0.40	0.40	0.42	0.38	0.39	0.41
Other Fuels⁶	0.30	0.32	0.33	0.34	0.33	0.34	0.35	0.32	0.34	0.36
Marketed Renewable Fuels										
Biomass	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Delivered Energy	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Delivered Energy Consumption by End-Use										
Space Heating ¹	1.79	2.11	2.15	2.18	2.13	2.21	2.28	2.12	2.21	2.30
Space Cooling ¹	0.44	0.47	0.48	0.49	0.47	0.49	0.51	0.46	0.49	0.52
Water Heating ¹	0.87	0.98	1.01	1.04	1.01	1.06	1.11	1.02	1.08	1.14
Ventilation	0.17	0.20	0.21	0.21	0.20	0.21	0.22	0.20	0.21	0.22
Cooking	0.24	0.27	0.28	0.28	0.28	0.29	0.31	0.28	0.30	0.32
Lighting	1.21	1.38	1.42	1.46	1.42	1.48	1.54	1.41	1.47	1.55
Refrigeration	0.18	0.21	0.21	0.22	0.21	0.22	0.23	0.21	0.22	0.24
Office Equipment (PC)	0.10	0.23	0.24	0.25	0.26	0.28	0.29	0.27	0.29	0.32
Office Equipment (non-PC)	0.30	0.49	0.51	0.53	0.57	0.60	0.63	0.64	0.69	0.74
Other Uses ⁷	2.29	3.00	3.07	3.14	3.23	3.35	3.47	3.40	3.58	3.77
Delivered Energy	7.59	9.33	9.59	9.80	9.79	10.19	10.59	10.01	10.55	11.10

Economic Growth Case Comparisons

Table B5. Commercial Sector Key Indicators and Consumption (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Electricity Related Losses	8.01	9.46	9.71	9.87	9.74	10.10	10.36	9.76	10.20	10.63
Total Energy Consumption by End-Use										
Space Heating ¹	2.09	2.42	2.48	2.51	2.43	2.52	2.59	2.40	2.50	2.60
Space Cooling ¹	1.36	1.35	1.39	1.41	1.32	1.37	1.42	1.26	1.33	1.40
Water Heating ¹	1.19	1.29	1.33	1.36	1.31	1.37	1.42	1.30	1.37	1.43
Ventilation	0.55	0.60	0.61	0.62	0.58	0.61	0.62	0.56	0.59	0.62
Cooking	0.31	0.33	0.34	0.35	0.34	0.35	0.36	0.33	0.35	0.37
Lighting	3.83	4.14	4.26	4.32	4.15	4.29	4.40	4.02	4.15	4.31
Refrigeration	0.58	0.62	0.64	0.66	0.61	0.64	0.67	0.59	0.63	0.67
Office Equipment (PC)	0.33	0.69	0.71	0.73	0.77	0.81	0.84	0.78	0.83	0.88
Office Equipment (non-PC)	0.94	1.47	1.52	1.56	1.66	1.74	1.82	1.82	1.94	2.07
Other Uses ⁷	4.43	5.88	6.03	6.15	6.36	6.59	6.81	6.71	7.05	7.39
Total	15.61	18.79	19.30	19.67	19.53	20.29	20.95	19.77	20.75	21.73
Non-Marketed Renewable Fuels										
Solar ⁸	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Total	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03

¹Includes fuel consumption for district services.

²Includes miscellaneous uses, such as service station equipment, automated teller machines, telecommunications equipment, and medical equipment.

³Excludes estimated consumption from independent power producers.

⁴Includes miscellaneous uses, such as pumps, emergency electric generators, cogeneration in commercial buildings, and manufacturing performed in commercial buildings.

⁵Includes miscellaneous uses, such as cooking, emergency electric generators, and cogeneration in commercial buildings.

⁶Includes residual fuel oil, liquefied petroleum gas, coal, motor gasoline, and kerosene.

⁷Includes miscellaneous uses, such as service station equipment, automated teller machines, telecommunications equipment, medical equipment, pumps, lighting, emergency electric generators, cogeneration in commercial buildings, manufacturing performed in commercial buildings, and cooking (distillate), plus residual fuel oil, liquefied petroleum gas, coal, motor gasoline, and kerosene.

⁸Includes primary energy displaced by solar thermal space heating and water heating, and electricity generation by solar photovoltaic systems.

Btu = British thermal unit.

PC = Personal computer.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999: Energy Information Administration (EIA), *Short-Term Energy Outlook, September 2000*, <http://www.eia.doe.gov/pub/forecasting/steo/oldsteos/sep00.pdf>.

Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B6. Industrial Sector Key Indicators and Consumption
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Key Indicators										
Value of Gross Output (billion 1992 dollars)										
Manufacturing	3,749	4,850	5,089	5,531	5,444	5,828	6,471	6,149	6,726	7,735
Nonmanufacturing	972	1,092	1,162	1,238	1,157	1,265	1,364	1,210	1,370	1,516
Total	4,722	5,942	6,251	6,769	6,601	7,093	7,835	7,359	8,096	9,251
Energy Prices (1999 dollars per million Btu)										
Electricity	13.09	10.86	11.24	11.92	10.67	11.27	11.97	10.69	11.62	12.67
Natural Gas	2.79	3.12	3.31	3.68	3.20	3.45	3.81	3.29	3.76	4.31
Steam Coal	1.43	1.28	1.29	1.31	1.24	1.25	1.27	1.19	1.21	1.24
Residual Oil	2.78	3.32	3.42	3.50	3.35	3.50	3.62	3.39	3.58	3.75
Distillate Oil	4.65	5.26	5.45	5.58	5.35	5.73	5.93	5.44	5.94	6.28
Liquefied Petroleum Gas	8.50	7.39	8.01	7.99	7.26	7.75	7.97	7.15	7.83	8.27
Motor Gasoline	9.42	10.59	10.90	11.29	10.38	10.70	11.06	10.23	10.64	11.04
Metallurgical Coal	1.65	1.53	1.54	1.55	1.47	1.49	1.50	1.43	1.44	1.46
Energy Consumption										
Consumption¹										
Purchased Electricity	3.63	3.97	4.18	4.53	4.14	4.47	4.92	4.35	4.81	5.47
Natural Gas ²	9.43	10.68	11.11	11.70	11.07	11.76	12.59	11.38	12.34	13.46
Steam Coal	1.73	1.82	1.85	1.91	1.82	1.87	1.94	1.82	1.90	1.99
Metallurgical Coal and Coke ³	0.81	0.73	0.76	0.82	0.70	0.74	0.82	0.67	0.72	0.83
Residual Fuel	0.22	0.24	0.25	0.27	0.24	0.26	0.28	0.25	0.27	0.31
Distillate	1.07	1.19	1.27	1.35	1.24	1.35	1.46	1.28	1.44	1.61
Liquefied Petroleum Gas	2.32	2.36	2.50	2.73	2.43	2.65	2.93	2.49	2.83	3.25
Petrochemical Feedstocks	1.29	1.44	1.53	1.67	1.47	1.61	1.78	1.49	1.70	1.94
Other Petroleum ⁴	4.50	4.78	5.00	5.34	4.90	5.27	5.65	5.07	5.52	6.08
Renewables ⁵	2.15	2.52	2.64	2.82	2.66	2.86	3.10	2.78	3.08	3.44
Delivered Energy	27.15	29.73	31.10	33.12	30.68	32.84	35.48	31.59	34.63	38.39
Electricity Related Losses	7.87	7.93	8.32	8.90	7.94	8.48	9.18	8.04	8.76	9.78
Total	35.02	37.66	39.42	42.02	38.62	41.31	44.66	39.63	43.39	48.17
Consumption per Unit of Output¹ (thousand Btu per 1992 dollars)										
Purchased Electricity	0.77	0.67	0.67	0.67	0.63	0.63	0.63	0.59	0.59	0.59
Natural Gas ²	2.00	1.80	1.78	1.73	1.68	1.66	1.61	1.55	1.52	1.46
Steam Coal	0.37	0.31	0.30	0.28	0.28	0.26	0.25	0.25	0.23	0.22
Metallurgical Coal and Coke ³	0.17	0.12	0.12	0.12	0.11	0.10	0.10	0.09	0.09	0.09
Residual Fuel	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03
Distillate	0.23	0.20	0.20	0.20	0.19	0.19	0.19	0.17	0.18	0.17
Liquefied Petroleum Gas	0.49	0.40	0.40	0.40	0.37	0.37	0.37	0.34	0.35	0.35
Petrochemical Feedstocks	0.27	0.24	0.24	0.25	0.22	0.23	0.23	0.20	0.21	0.21
Other Petroleum ⁴	0.95	0.80	0.80	0.79	0.74	0.74	0.72	0.69	0.68	0.66
Renewables ⁵	0.46	0.42	0.42	0.42	0.40	0.40	0.40	0.38	0.38	0.37
Delivered Energy	5.75	5.00	4.98	4.89	4.65	4.63	4.53	4.29	4.28	4.15
Electricity Related Losses	1.67	1.33	1.33	1.32	1.20	1.20	1.17	1.09	1.08	1.06
Total	7.42	6.34	6.31	6.21	5.85	5.82	5.70	5.39	5.36	5.21

¹Fuel consumption includes consumption for cogeneration.

²Includes lease and plant fuel.

³Includes net coke coal imports.

⁴Includes petroleum coke, asphalt, road oil, lubricants, motor gasoline, still gas, and miscellaneous petroleum products.

⁵Includes consumption of energy from hydroelectric, wood and wood waste, municipal solid waste, and other biomass.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999 prices for gasoline and distillate are based on prices in various issues of Energy Information Administration (EIA), *Petroleum Marketing Monthly*, DOE/EIA-0380 (99/03-2000/04) (Washington, DC, 1999-2000). 1999 coal prices are based on EIA, *Quarterly Coal Report*, DOE/EIA-0121(2000/1Q) (Washington, DC, August 2000) and EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A. 1999 electricity prices: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A. Other 1999 prices derived from EIA, *State Energy Data Report 1997*, DOE/EIA-0214(97) (Washington, DC, September 1999). Other 1999 values: EIA, *Short-Term Energy Outlook, September 2000*, <http://www.eia.doe.gov/pub/forecasting/steo/oldsteos/sep00.pdf>.

Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B7. Transportation Sector Key Indicators and Delivered Energy Consumption

Key Indicators and Consumption	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Key Indicators										
Level of Travel (billions)										
Light-Duty Vehicles <8,500 pounds (VMT)	2394	2974	3066	3163	3189	3334	3475	3372	3577	3776
Commercial Light Trucks (VMT) ¹	73	89	93	98	97	103	110	103	113	123
Freight Trucks >10,000 pounds (VMT)	204	264	280	301	289	313	343	316	352	398
Air (seat miles available)	1099	1498	1592	1706	1767	1934	2103	2039	2317	2583
Rail (ton miles traveled)	1357	1634	1706	1806	1719	1826	1968	1807	1967	2199
Domestic Shipping (ton miles traveled)	661	738	775	817	774	832	888	807	890	964
Energy Efficiency Indicators										
New Light-Duty Vehicle (miles per gallon) ²	24.2	27.0	27.1	27.1	27.6	27.6	27.6	28.1	28.0	28.0
New Car (miles per gallon) ²	27.9	32.2	32.3	32.3	32.4	32.4	32.4	32.5	32.5	32.4
New Light Truck (miles per gallon) ²	20.8	23.2	23.2	23.2	24.0	24.0	24.0	24.7	24.7	24.7
Light-Duty Fleet (miles per gallon) ³	20.5	20.9	20.9	21.0	21.2	21.2	21.2	21.4	21.5	21.5
New Commercial Light Truck (MPG) ¹	20.1	22.0	22.0	22.0	22.8	22.8	22.8	23.5	23.4	23.4
Stock Commercial Light Truck (MPG) ¹	14.8	16.1	16.1	16.1	16.5	16.6	16.6	17.0	17.0	17.0
Aircraft Efficiency (seat miles per gallon)	51.7	55.9	56.1	56.3	58.0	58.2	58.4	60.0	60.3	60.6
Freight Truck Efficiency (miles per gallon)	6.0	6.4	6.4	6.5	6.7	6.7	6.7	6.9	6.9	7.0
Rail Efficiency (ton miles per thousand Btu)	2.8	3.1	3.1	3.1	3.3	3.3	3.3	3.4	3.4	3.4
Domestic Shipping Efficiency (ton miles per thousand Btu)	2.3	2.7	2.7	2.7	2.8	2.8	2.8	3.0	3.0	3.0
Energy Use by Mode (quadrillion Btu)										
Light-Duty Vehicles	14.88	17.98	18.51	19.08	19.00	19.83	20.64	19.81	20.98	22.10
Commercial Light Trucks ¹	0.62	0.70	0.73	0.76	0.73	0.78	0.83	0.76	0.83	0.90
Freight Trucks ⁴	4.54	5.48	5.78	6.19	5.78	6.24	6.79	6.08	6.74	7.55
Air ⁵	3.50	4.32	4.56	4.85	4.86	5.28	5.69	5.38	6.04	6.67
Rail ⁶	0.57	0.63	0.65	0.68	0.63	0.67	0.71	0.64	0.69	0.76
Marine ⁷	1.29	1.44	1.46	1.49	1.46	1.49	1.52	1.48	1.52	1.56
Pipeline Fuel	0.66	0.87	0.90	0.93	0.94	0.99	1.05	1.00	1.09	1.15
Lubricants	0.22	0.25	0.26	0.28	0.27	0.29	0.31	0.28	0.31	0.35
Total	26.28	31.69	32.89	34.29	33.71	35.60	37.57	35.48	38.23	41.06
Energy Use by Mode (million barrels per day oil equivalent)										
Light-Duty Vehicles	7.76	9.42	9.70	10.00	9.95	10.39	10.81	10.37	10.99	11.57
Commercial Light Trucks ¹	0.32	0.36	0.38	0.40	0.38	0.41	0.43	0.40	0.43	0.47
Freight Trucks ⁴	2.03	2.46	2.60	2.79	2.60	2.81	3.07	2.74	3.04	3.43
Railroad	0.23	0.25	0.26	0.27	0.25	0.26	0.28	0.25	0.27	0.30
Domestic Shipping	0.13	0.13	0.13	0.14	0.13	0.14	0.15	0.12	0.14	0.15
International Shipping	0.30	0.35	0.35	0.35	0.36	0.36	0.36	0.36	0.36	0.36
Air ⁵	1.46	1.84	1.95	2.08	2.09	2.28	2.46	2.33	2.63	2.91
Military Use	0.28	0.31	0.32	0.33	0.32	0.34	0.35	0.33	0.36	0.38
Bus Transportation	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Rail Transportation ⁶	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Recreational Boats	0.16	0.18	0.18	0.18	0.19	0.19	0.19	0.19	0.20	0.20
Lubricants	0.10	0.12	0.12	0.13	0.13	0.14	0.15	0.13	0.15	0.16
Pipeline Fuel	0.33	0.44	0.45	0.47	0.47	0.50	0.53	0.51	0.55	0.58
Total	13.24	15.99	16.59	17.29	17.00	17.94	18.92	17.88	19.26	20.66

¹Commercial trucks 8,500 to 10,000 pounds.

²Environmental Protection Agency rated miles per gallon.

³Combined car and light truck "on-the-road" estimate.

⁴Includes energy use by buses and military distillate consumption.

⁵Includes jet fuel and aviation gasoline.

⁶Includes passenger rail.

⁷Includes military residual fuel use and recreation boats.

Btu = British thermal unit.

VMT=Vehicle miles traveled.

MPG = Miles per gallon.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999: U.S. Department of Transportation, Research and Special Programs Administration, *Air Carrier Statistics Monthly, December 1999/1998* (Washington, DC, 1999); Energy Information Administration (EIA), *Short-Term Energy Outlook, September 2000*, <http://www.eia.doe.gov/pub/forecasting/steo/oldsteo/sep00.pdf>; EIA, *Fuel Oil and Kerosene Sales 1998*, DOE/EIA-0535(98) (Washington, DC, August 1999); and United States Department of Defense, Defense Fuel Supply Center. Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B8. Electricity Supply, Disposition, Prices, and Emissions
(Billion Kilowatthours, Unless Otherwise Noted)

Supply, Disposition, and Prices	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Generation by Fuel Type										
Electric Generators¹										
Coal	1833	2132	2196	2274	2176	2246	2362	2205	2298	2614
Petroleum	100	17	17	20	17	17	18	17	19	22
Natural Gas ²	371	835	900	977	1145	1266	1373	1409	1587	1584
Nuclear Power	730	720	720	720	632	639	650	554	574	591
Pumped Storage	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Renewable Sources ³	353	385	390	391	390	395	398	392	396	399
Total	3386	4088	4222	4381	4358	4563	4800	4576	4872	5209
Nonutility Generation for Own Use	16	16	16	16	16	16	16	16	16	16
Distributed Generation	0	2	3	4	2	4	7	3	6	10
Cogenerators⁴										
Coal	47	52	52	52	52	52	52	52	52	52
Petroleum	9	10	10	10	10	10	10	10	10	10
Natural Gas	206	253	257	264	268	276	288	284	299	320
Other Gaseous Fuels ⁵	4	7	7	7	7	7	8	7	8	8
Renewable Sources ³	31	37	39	42	40	44	47	42	48	54
Other ⁶	5	5	5	5	5	5	5	5	5	5
Total	302	364	370	380	382	394	411	400	422	450
Other End-Use Generators⁷										
Sales to Utilities	151	175	176	177	184	187	190	195	200	207
Generation for Own Use	156	194	199	208	202	213	226	210	227	248
Net Imports⁸	32	29	29	29	21	21	21	21	21	21
Electricity Sales by Sector										
Residential	1146	1435	1455	1467	1540	1573	1600	1645	1701	1736
Commercial	1083	1388	1432	1470	1490	1559	1629	1548	1643	1744
Industrial	1063	1164	1226	1327	1214	1309	1442	1276	1411	1604
Transportation	17	34	35	35	41	43	44	47	49	51
Total	3309	4020	4147	4299	4286	4484	4715	4516	4804	5135
End-Use Prices (1999 cents per kwh)⁹										
Residential	8.1	7.3	7.5	7.8	7.2	7.5	7.8	7.2	7.6	8.0
Commercial	7.3	5.8	6.0	6.4	5.7	6.0	6.4	5.7	6.2	6.7
Industrial	4.5	3.7	3.8	4.1	3.6	3.8	4.1	3.6	4.0	4.3
Transportation	5.3	4.6	4.6	4.8	4.4	4.5	4.7	4.3	4.5	4.6
All Sectors Average	6.7	5.7	5.9	6.1	5.7	5.9	6.1	5.6	6.0	6.4
Prices by Service Category⁹ (1999 cents per kilowatthour)										
Generation	4.1	3.1	3.2	3.4	3.0	3.2	3.5	3.1	3.4	3.7
Transmission	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Distribution	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0
Emissions (million short tons)										
Sulfur Dioxide	12.46	9.08	9.28	9.50	9.11	9.33	8.95	9.01	8.95	8.95
Nitrogen Oxide	5.45	4.14	4.22	4.30	4.26	4.33	4.38	4.34	4.42	4.46

¹Includes grid-connected generation at all utilities and nonutilities except for cogenerators. Includes small power producers and exempt wholesale generators.

²Includes electricity generation by fuel cells.

³Includes conventional hydroelectric, geothermal, wood, wood waste, municipal solid waste, landfill gas, other biomass, solar, and wind power.

⁴Cogenerators produce electricity and other useful thermal energy. Includes sales to utilities and generation for own use.

⁵Other gaseous fuels include refinery and still gas.

⁶Other includes hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.

⁷Includes 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.

⁸In 1999 approximately 70 percent of the U.S. electricity imports were provided by renewable sources (hydroelectricity); EIA does not project future proportions for the fuel source of imported electricity.

⁹Prices represent average revenue per kilowatthour.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.

Source: Energy Information Administration, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B9. Electricity Generating Capability
(Gigawatts)

Net Summer Capability ¹	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Electric Generators²										
Capability										
Coal Steam	306.0	310.4	315.0	320.0	309.8	315.3	328.0	308.4	316.4	356.7
Other Fossil Steam ³	138.2	120.9	120.4	120.3	118.1	117.3	116.7	116.8	116.1	115.5
Combined Cycle	20.2	111.8	126.0	140.9	158.1	181.3	203.0	195.4	229.1	240.4
Combustion Turbine/Diesel	75.2	155.3	164.1	175.3	175.0	184.6	197.4	195.3	210.7	222.9
Nuclear Power	97.4	93.7	93.7	93.7	78.4	79.5	80.9	68.5	71.6	73.8
Pumped Storage	19.3	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
Fuel Cells	0.0	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.3
Renewable Sources ⁴	88.1	95.0	95.4	95.6	96.0	96.5	96.9	96.5	97.0	97.5
Distributed Generation ⁵	0.0	4.3	6.0	9.4	5.3	8.8	15.7	6.5	12.7	23.0
Total	744.6	906.7	934.3	965.5	955.2	994.4	1042.5	1000.7	1060.7	1126.5
Cumulative Planned Additions⁶										
Coal Steam	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Fossil Steam ³	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Combined Cycle	0.0	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
Combustion Turbine/Diesel	0.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Nuclear Power	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
Fuel Cells	0.0	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.3
Renewable Sources ⁴	0.0	4.3	4.3	4.3	5.1	5.1	5.1	5.4	5.4	5.4
Distributed Generation ⁵	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	13.6	13.6	13.6	14.5	14.5	14.5	14.8	14.8	14.8
Cumulative Unplanned Additions⁶										
Coal Steam	0.0	14.0	18.5	23.4	14.0	19.5	32.0	14.0	21.8	62.0
Other Fossil Steam ³	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Combined Cycle	0.0	83.4	97.5	112.4	129.6	152.8	174.4	166.9	200.5	211.8
Combustion Turbine/Diesel	0.0	84.7	93.1	104.4	104.6	114.3	127.3	125.0	140.5	152.8
Nuclear Power	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
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Renewable Sources ⁴	0.0	2.1	2.6	2.7	2.4	2.9	3.2	2.6	3.1	3.6
Distributed Generation ⁵	0.0	4.3	6.0	9.4	5.3	8.8	15.7	6.5	12.7	23.0
Total	0.0	188.4	217.7	252.3	255.9	298.3	352.6	315.0	378.7	453.2
Cumulative Total Additions	0.0	202.0	231.3	265.9	270.5	312.8	367.1	329.7	393.4	468.0
Cumulative Retirements⁷										
Coal Steam	0.0	13.6	13.5	13.3	14.2	14.2	14.0	15.6	15.4	15.3
Other Fossil Steam ³	0.0	17.2	17.7	17.8	20.0	20.8	21.4	21.3	22.0	22.6
Combined Cycle	0.0	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1
Combustion Turbine/Diesel	0.0	5.8	5.1	5.2	6.0	5.8	6.0	6.0	5.9	6.0
Nuclear Power	0.0	3.7	3.7	3.7	19.1	18.0	16.6	29.0	25.9	23.7
Pumped Storage	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
Renewable Sources ⁴	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total	0.0	40.6	40.3	40.3	59.6	59.0	58.2	72.2	69.4	67.8

Economic Growth Case Comparisons

Table B9. Electricity Generating Capability (Continued)
(Gigawatts)

Net Summer Capability ¹	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Cogenerators⁸										
Capability										
Coal	8.4	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
Petroleum	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Natural Gas	33.8	42.4	43.0	44.0	44.6	45.7	47.4	46.9	49.0	51.9
Other Gaseous Fuels	0.2	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1
Renewable Sources ⁴	5.3	6.4	6.8	7.2	6.9	7.5	8.2	7.2	8.2	9.3
Other	1.1	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Total	51.6	62.3	63.2	64.7	64.9	66.8	69.3	67.6	70.9	74.9
Cumulative Additions⁶	0.0	10.6	11.5	13.1	13.3	15.2	17.6	15.9	19.2	23.3
Other End-Use Generators⁹										
Renewable Sources ¹⁰	1.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Cumulative Additions	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

¹Net summer capability 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.

²Includes grid-connected utilities and nonutilities except for cogenerators. Includes small power producers and exempt wholesale generators.

³Includes oil-, gas-, and dual-fired capability.

⁴Includes conventional hydroelectric, geothermal, wood, wood waste, municipal solid waste, landfill gas, other biomass, solar and wind power.

⁵Primarily peak-load capacity fueled by natural gas

⁶Cumulative additions after December 31, 1999.

⁷Cumulative total retirements after December 31, 1999.

⁸Nameplate capacity is reported for nonutilities on Form EIA-860B, "Annual Electric Generator Report - Nonutility." Nameplate capacity is designated by the manufacturer. The nameplate capacity has been converted to the net summer capability based on historic relationships.

⁹Includes 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. Excludes off-grid photovoltaics and other generators not connected to the distribution or transmission systems.

¹⁰See Table B17 for more detail.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model estimates and may differ slightly from official EIA data reports. Net summer capability has been estimated for nonutility generators to be consistent with capability for electric utility generators.

Source: Energy Information Administration, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B10. Electricity Trade
(Billion Kilowatthours, Unless Otherwise Noted)

Electricity Trade	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Interregional Electricity Trade										
Gross Domestic Firm Power Trade	182.2	102.9	102.9	102.9	45.7	45.7	45.7	0.0	0.0	0.0
Gross Domestic Economy Trade	147.2	185.6	183.3	199.1	195.6	195.5	193.9	201.0	209.0	213.9
Gross Domestic Trade	329.4	288.5	286.2	302.0	241.3	241.3	239.7	201.0	209.0	213.9
Gross Domestic Firm Power Sales										
(million 1999 dollars)	8588.1	4851.0	4851.0	4851.0	2156.0	2156.0	2156.0	0.0	0.0	0.0
Gross Domestic Economy Sales										
(million 1999 dollars)	4331.4	4901.0	5042.0	5931.0	5255.0	5513.0	5842.0	5449.0	6291.0	6999.0
Gross Domestic Sales	12919.5	9752.0	9893.0	10782.0	7411.0	7669.0	7998.0	5449.0	6291.0	6999.0
(million 1999 dollars)										
International Electricity Trade										
Firm Power Imports From Canada and Mexico ¹	27.0	5.8	5.8	5.8	2.6	2.6	2.6	0.0	0.0	0.0
Economy Imports From Canada and Mexico ¹ ..	20.6	39.7	39.7	39.6	30.0	30.0	30.1	28.6	28.6	28.6
Gross Imports From Canada and Mexico¹ ..	47.6	45.5	45.5	45.4	32.6	32.6	32.6	28.6	28.6	28.6
Firm Power Exports To Canada and Mexico ..	9.2	8.7	8.7	8.7	3.9	3.9	3.9	0.0	0.0	0.0
Economy Exports To Canada and Mexico	6.3	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
Gross Exports To Canada and Mexico	15.5	16.4	16.4	16.4	11.5	11.5	11.5	7.7	7.7	7.7

¹Historically electricity imports were primarily from renewable resources, principally hydroelectric.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports. Firm Power Sales are capacity sales, meaning the delivery of the power is scheduled as part of the normal operating conditions of the affected electric systems. Economy Sales are subject to curtailment or cessation of delivery by the supplier in accordance with prior agreements or under specified conditions.

Source: Energy Information Administration, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B11. Petroleum Supply and Disposition Balance
(Million Barrels per Day, Unless Otherwise Noted)

Supply and Disposition	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Crude Oil										
Domestic Crude Production ¹	5.88	5.08	5.15	5.21	4.94	5.08	5.22	4.86	5.05	5.26
Alaska	1.05	0.64	0.64	0.64	0.70	0.70	0.70	0.64	0.64	0.64
Lower 48 States	4.83	4.43	4.50	4.57	4.24	4.38	4.52	4.23	4.41	4.62
Net Imports	8.61	11.13	11.54	12.02	11.81	11.91	12.22	12.14	12.14	12.48
Gross Imports	8.73	11.17	11.59	12.07	11.84	11.95	12.27	12.17	12.18	12.53
Exports	0.12	0.04	0.04	0.04	0.03	0.04	0.05	0.03	0.04	0.05
Other Crude Supply ²	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Crude Supply	14.80	16.21	16.69	17.23	16.74	16.99	17.44	17.01	17.19	17.74
Natural Gas Plant Liquids	1.85	2.26	2.35	2.45	2.47	2.63	2.78	2.67	2.89	3.02
Other Inputs³	0.60	0.20	0.20	0.28	0.21	0.21	0.22	0.22	0.23	0.23
Refinery Processing Gain⁴	0.89	0.99	1.02	1.10	0.98	1.06	1.15	1.02	1.10	1.21
Net Product Imports⁵	1.30	2.12	2.38	2.72	2.45	3.33	4.11	2.90	4.37	5.75
Gross Refined Product Imports ⁶	1.73	2.26	2.40	2.66	2.78	3.30	4.03	3.13	4.26	5.66
Unfinished Oil Imports	0.32	0.69	0.79	0.89	0.51	0.87	0.94	0.65	0.99	0.96
Ether Imports	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exports	0.82	0.83	0.81	0.83	0.84	0.84	0.85	0.88	0.88	0.88
Total Primary Supply⁷	19.44	21.78	22.64	23.78	22.85	24.21	25.70	23.81	25.79	27.96
Refined Petroleum Products Supplied										
Motor Gasoline ⁸	8.43	9.82	10.11	10.43	10.30	10.75	11.18	10.70	11.33	11.94
Jet Fuel ⁹	1.67	2.06	2.18	2.32	2.33	2.52	2.72	2.57	2.88	3.18
Distillate Fuel ¹⁰	3.52	4.27	4.47	4.74	4.47	4.78	5.14	4.65	5.10	5.62
Residual Fuel	0.82	0.57	0.58	0.61	0.57	0.59	0.61	0.58	0.60	0.64
Other ¹¹	5.07	5.11	5.36	5.75	5.22	5.62	6.10	5.35	5.92	6.61
Total	19.50	21.83	22.70	23.83	22.89	24.26	25.75	23.85	25.83	28.00
Refined Petroleum Products Supplied										
Residential and Commercial	1.10	1.06	1.06	1.08	1.03	1.04	1.05	1.01	1.02	1.03
Industrial ¹²	5.16	5.29	5.58	6.01	5.43	5.89	6.42	5.58	6.23	7.01
Transportation	12.86	15.41	15.98	16.66	16.36	17.26	18.20	17.18	18.50	19.86
Electric Generators ¹³	0.38	0.07	0.07	0.09	0.07	0.07	0.08	0.07	0.08	0.09
Total	19.50	21.83	22.70	23.83	22.89	24.26	25.75	23.85	25.83	28.00
Discrepancy¹⁴	-0.07	-0.05	-0.06	-0.05	-0.05	-0.05	-0.04	-0.04	-0.04	-0.04
World Oil Price (1999 dollars per barrel)¹⁵	17.35	20.70	21.37	21.87	20.93	21.89	22.70	21.16	22.41	23.51
Import Share of Product Supplied	0.51	0.61	0.61	0.62	0.62	0.63	0.63	0.63	0.64	0.65
Net Expenditures for Imported Crude Oil and Petroleum Products (billion 1999 dollars)	60.16	104.46	113.67	123.12	114.59	129.29	144.97	122.68	145.38	170.75
Domestic Refinery Distillation Capacity¹⁶	16.5	17.5	17.9	18.4	17.9	18.1	18.4	18.2	18.2	18.8
Capacity Utilization Rate (percent)	93.0	93.0	93.6	94.2	93.6	94.3	95.0	94.0	95.0	95.1

¹Includes lease condensate.

²Strategic petroleum reserve stock additions plus unaccounted for crude oil and crude stock withdrawals minus crude products supplied.

³Includes alcohols, ethers, petroleum product stock withdrawals, domestic sources of blending components, and other hydrocarbons.

⁴Represents volumetric gain in refinery distillation and cracking processes.

⁵Includes net imports of finished petroleum products, unfinished oils, other hydrocarbons, alcohols, ethers, and blending components.

⁶Includes blending components.

⁷Total crude supply plus natural gas plant liquids, other inputs, refinery processing gain, and net petroleum imports.

⁸Includes ethanol and ethers blended into gasoline.

⁹Includes naphtha and kerosene types.

¹⁰Includes distillate and kerosene.

¹¹Includes aviation gasoline, liquefied petroleum gas, petrochemical feedstocks, lubricants, waxes, asphalt, road oil, still gas, special naphthas, petroleum coke, crude oil product supplied, and miscellaneous petroleum products.

¹²Includes consumption by cogenerators.

¹³Includes all electric power generators except cogenerators, which produce electricity and other useful thermal energy. Includes small power producers and exempt wholesale generators.

¹⁴Balancing item. Includes unaccounted for supply, losses and gains.

¹⁵Average refiner acquisition cost for imported crude oil.

¹⁶End-of-year capacity.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999 product supplied data from Table B2. Other 1999 data: Energy Information Administration (EIA), *Petroleum Supply Annual 1999*, DOE/EIA-0340(99/1) (Washington, DC, June 2000). Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B12. Petroleum Product Prices
(1999 Cents per Gallon, Unless Otherwise Noted)

Sector and Fuel	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
World Oil Price (1999 dollars per barrel)	17.35	20.70	21.37	21.87	20.93	21.89	22.70	21.16	22.41	23.51
Delivered Sector Product Prices										
Residential										
Distillate Fuel	87.0	101.4	104.1	105.9	102.7	108.1	110.8	103.9	110.7	113.4
Liquefied Petroleum Gas	89.4	107.6	112.8	112.6	106.2	110.7	112.8	105.1	111.1	114.9
Commercial										
Distillate Fuel	60.6	70.6	73.2	74.9	71.7	77.0	79.7	72.8	79.7	83.3
Residual Fuel	39.3	53.8	55.3	56.5	54.2	56.4	58.3	54.7	57.6	60.2
Residual Fuel (1999 dollars per barrel) .	16.53	22.58	23.22	23.71	22.77	23.71	24.49	22.97	24.20	25.29
Industrial¹										
Distillate Fuel	64.5	73.0	75.6	77.4	74.3	79.5	82.2	75.4	82.5	87.1
Liquefied Petroleum Gas	73.4	63.8	69.1	68.9	62.6	66.9	68.8	61.7	67.6	71.4
Residual Fuel	41.7	49.7	51.2	52.4	50.2	52.4	54.2	50.7	53.6	56.1
Residual Fuel (1999 dollars per barrel) .	17.50	20.88	21.51	22.01	21.08	22.00	22.78	21.29	22.50	23.58
Transportation										
Diesel Fuel (distillate) ²	114.0	120.0	124.0	127.6	119.3	125.5	129.5	117.9	124.6	131.5
Jet Fuel ³	63.5	70.8	73.8	76.0	71.5	77.7	81.2	73.4	79.4	82.2
Motor Gasoline ⁴	118.2	132.3	136.3	141.0	129.7	133.9	138.3	128.0	133.0	138.1
Liquefied Petroleum Gas	111.1	117.8	123.1	123.7	115.5	120.5	123.6	112.9	119.5	124.5
Residual Fuel	36.8	46.0	47.5	48.7	46.5	48.7	50.6	46.9	49.8	52.4
Residual Fuel (1999 dollars per barrel) .	15.45	19.32	19.96	20.46	19.51	20.45	21.23	19.70	20.92	22.00
Ethanol (E85)	129.2	170.4	170.1	171.8	172.8	172.2	173.7	165.3	173.3	175.2
Methanol (M85)	76.2	99.0	100.7	102.9	102.6	105.1	107.4	102.1	105.8	108.9
Electric Generators⁵										
Distillate Fuel	56.2	64.5	67.1	68.9	65.7	70.7	73.5	66.9	73.2	78.1
Residual Fuel	36.2	56.5	58.1	57.8	57.5	59.9	61.3	58.3	60.9	62.1
Residual Fuel (1999 dollars per barrel) .	15.21	23.71	24.42	24.26	24.13	25.17	25.76	24.50	25.56	26.07
Refined Petroleum Product Prices⁶										
Distillate Fuel	100.8	109.7	113.5	116.7	109.8	115.9	119.7	109.4	116.2	122.5
Jet Fuel ³	63.5	70.8	73.8	76.0	71.5	77.7	81.2	73.4	79.4	82.2
Liquefied Petroleum Gas	76.3	71.7	76.6	76.0	70.3	74.1	75.6	69.2	74.4	77.5
Motor Gasoline ⁴	118.2	132.3	136.3	141.0	129.7	133.9	138.3	128.0	133.0	138.1
Residual Fuel	37.1	48.2	49.8	51.0	48.8	51.0	53.0	49.3	52.2	54.9
Residual Fuel (1999 dollars per barrel) .	15.59	20.26	20.93	21.43	20.48	21.44	22.24	20.69	21.94	23.06
Average	97.6	109.5	113.1	115.9	108.1	112.5	115.9	107.1	112.2	115.64

¹Includes cogenerators. Includes Federal and State taxes while excluding county and state taxes.

²Low sulfur diesel fuel. Includes Federal and State taxes while excluding county and local taxes.

³Kerosene-type jet fuel.

⁴Sales weighted-average price for all grades. Includes Federal and State taxes while excluding county and local taxes.

⁵Includes all electric power generators except cogenerators, which produce electricity and other useful thermal energy. Includes small power producers and exempt wholesale generators.

⁶Weighted averages of end-use fuel prices are derived from the prices in each sector and the corresponding sectoral consumption.

Note: Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999 prices for gasoline, distillate, and jet fuel are based on prices in various issues of Energy Information Administration (EIA), *Petroleum Marketing Monthly*, DOE/EIA-0380 (99/03-2000/04) (Washington, DC, 1999-2000). 1999 prices for all other petroleum products are derived from EIA, *State Energy Price and Expenditure Report 1997*, DOE/EIA-0376(97) (Washington, DC, July 2000). Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B13. Natural Gas Supply and Disposition
(Trillion Cubic Feet per Year)

Supply and Disposition	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Production										
Dry Gas Production ¹	18.67	22.27	23.14	24.16	24.63	26.24	27.86	26.74	29.04	30.38
Supplemental Natural Gas ²	0.10	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Net Imports	3.38	4.93	5.06	5.22	5.35	5.50	5.62	5.58	5.80	5.82
Canada	3.29	4.68	4.81	4.97	5.05	5.21	5.33	5.24	5.46	5.48
Mexico	-0.01	-0.25	-0.25	-0.25	-0.33	-0.33	-0.33	-0.40	-0.40	-0.40
Liquefied Natural Gas	0.10	0.50	0.50	0.50	0.62	0.62	0.62	0.74	0.74	0.74
Total Supply	22.15	27.26	28.25	29.44	30.03	31.80	33.54	32.38	34.90	36.25
Consumption by Sector										
Residential	4.72	5.49	5.54	5.56	5.70	5.83	5.90	5.95	6.14	6.21
Commercial	3.07	3.69	3.78	3.84	3.79	3.94	4.07	3.83	4.02	4.19
Industrial ³	7.95	8.95	9.33	9.85	9.18	9.76	10.50	9.36	10.18	11.20
Electric Generators ⁴	3.78	6.54	6.94	7.45	8.54	9.30	9.97	10.23	11.34	11.29
Lease and Plant Fuel ⁵	1.23	1.45	1.49	1.54	1.60	1.68	1.76	1.72	1.84	1.91
Pipeline Fuel	0.64	0.84	0.87	0.91	0.91	0.97	1.03	0.98	1.06	1.12
Transportation ⁶	0.02	0.09	0.09	0.09	0.12	0.13	0.13	0.14	0.15	0.17
Total	21.41	27.05	28.05	29.24	29.85	31.61	33.36	32.22	34.73	36.09
Discrepancy⁷	0.74	0.21	0.21	0.19	0.18	0.18	0.18	0.16	0.17	0.17

¹Marketed production (wet) minus extraction losses.
²Synthetic natural gas, propane air, coke oven gas, refinery gas, biomass gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural gas.
³Includes consumption by cogenerators.
⁴Includes all electric power generators except cogenerators, which produce electricity and other useful thermal energy. Includes small power producers and exempt wholesale generators.
⁵Represents natural gas used in the field gathering and processing plant machinery.
⁶Compressed natural gas used as vehicle fuel.
⁷Balancing item. Natural gas lost as a result of converting flow data measured at varying temperatures and pressures to a standard temperature and pressure and the merger of different data reporting systems which vary in scope, format, definition, and respondent type. In addition, 1999 values include net storage injections.
 Btu = British thermal unit.
 Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.
 Sources: 1999 supplemental natural gas: Energy Information Administration (EIA), *Natural Gas Monthly*, DOE/EIA-0130(2000/06) (Washington, DC, June 2000). 1999 transportation sector consumption: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A. Other 1999 consumption: EIA, *Short-Term Energy Outlook, September 2000*, <http://www.eia.doe.gov/pub/forecasting/steo/oldsteos/sep00.pdf> with adjustments to end-use sector consumption levels for consumption of natural gas by electric wholesale generators based on EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A. Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B14. Natural Gas Prices, Margins, and Revenue
(1999 Dollars per Thousand Cubic Feet, Unless Otherwise Noted)

Prices, Margins, and Revenue	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Source Price										
Average Lower 48 Wellhead Price ¹	2.08	2.49	2.69	3.08	2.59	2.83	3.20	2.66	3.13	3.68
Average Import Price	2.29	2.33	2.43	2.53	2.35	2.47	2.58	2.44	2.67	2.89
Average²	2.11	2.46	2.64	2.98	2.54	2.76	3.09	2.62	3.05	3.55
Delivered Prices										
Residential	6.69	6.50	6.70	7.09	6.37	6.61	6.95	6.32	6.73	7.24
Commercial	5.49	5.45	5.65	6.03	5.41	5.65	6.00	5.42	5.86	6.38
Industrial ³	2.87	3.20	3.40	3.78	3.29	3.54	3.91	3.38	3.86	4.43
Electric Generators ⁴	2.59	2.90	3.08	3.45	3.05	3.30	3.67	3.17	3.66	4.17
Transportation ⁵	7.21	6.95	7.23	7.74	6.99	7.36	7.84	6.96	7.52	8.17
Average⁶	4.16	4.21	4.38	4.72	4.17	4.39	4.72	4.19	4.62	5.14
Transmission & Distribution Margins⁷										
Residential	4.58	4.05	4.07	4.12	3.83	3.85	3.86	3.70	3.68	3.69
Commercial	3.37	2.99	3.01	3.05	2.86	2.89	2.91	2.80	2.81	2.84
Industrial ³	0.75	0.74	0.76	0.80	0.74	0.78	0.82	0.76	0.82	0.88
Electric Generators ⁴	0.48	0.44	0.45	0.47	0.50	0.54	0.59	0.55	0.61	0.62
Transportation ⁵	5.10	4.49	4.60	4.76	4.45	4.60	4.75	4.34	4.48	4.62
Average⁶	2.04	1.75	1.74	1.74	1.63	1.63	1.63	1.57	1.57	1.60
Transmission & Distribution Revenue (billion 1999 dollars)										
Residential	21.61	22.21	22.55	22.88	21.83	22.42	22.78	22.03	22.58	22.93
Commercial	10.36	11.05	11.40	11.72	10.85	11.38	11.84	10.73	11.31	11.88
Industrial ³	6.00	6.66	7.12	7.88	6.80	7.61	8.66	7.08	8.32	9.86
Electric Generators ⁴	1.81	2.87	3.11	3.48	4.29	5.02	5.84	5.67	6.93	7.05
Transportation ⁵	0.08	0.39	0.42	0.45	0.53	0.58	0.63	0.62	0.69	0.77
Total	39.86	43.18	44.59	46.40	44.31	47.01	49.76	46.13	49.82	52.48

¹Represents lower 48 onshore and offshore supplies.

²Quantity-weighted average of the average lower 48 wellhead price and the average price of imports at the U.S. border.

³Includes consumption by cogenerators.

⁴Includes all electric power generators except cogenerators, which produce electricity and other useful thermal energy. Includes small power producers and exempt wholesale generators.

⁵Compressed natural gas used as a vehicle fuel. Price includes estimated motor vehicle fuel taxes.

⁶Weighted average prices and margins. Weights used are the sectoral consumption values excluding lease, plant, and pipeline fuel.

⁷Within the table, "transmission and distribution" margins equal the difference between the delivered price and the source price (average of the wellhead price and the price of imports at the U.S. border) of natural gas and, thus, reflect the total cost of bringing natural gas to market. When the term "transmission and distribution" margins is used in today's natural gas market, it generally does not include the cost of independent natural gas marketers or costs associated with aggregation of supplies, provisions of storage, and other services. As used here, the term includes the cost of all services and the cost of pipeline fuel used in compressor stations.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999 industrial delivered prices based on Energy Information Administration (EIA), *Manufacturing Energy Consumption Survey 1994*. 1999 residential and commercial delivered prices, average lower 48 wellhead price, and average import price: EIA, *Natural Gas Monthly*, DOE/EIA-0130(2000/06) (Washington, DC, June 2000). Other 1999 values and projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B15. Oil and Gas Supply

Production and Supply	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Crude Oil										
Lower 48 Average Wellhead Price¹ (1999 dollars per barrel)	16.49	20.05	20.80	21.29	20.16	21.00	21.87	20.40	21.45	22.57
Production (million barrels per day)²										
U.S. Total	5.88	5.08	5.15	5.21	4.94	5.08	5.22	4.86	5.05	5.26
Lower 48 Onshore	3.27	2.42	2.46	2.48	2.45	2.52	2.57	2.54	2.64	2.74
Conventional	2.59	1.77	1.79	1.83	1.74	1.78	1.85	1.87	1.92	1.98
Enhanced Oil Recovery	0.68	0.65	0.66	0.65	0.72	0.74	0.67	0.67	0.72	0.76
Lower 48 Offshore	1.56	2.02	2.05	2.09	1.79	1.86	1.95	1.68	1.77	1.88
Alaska	1.05	0.64	0.64	0.64	0.70	0.70	0.70	0.64	0.64	0.64
Lower 48 End of Year Reserves (billion barrels)² .	18.33	13.73	13.92	14.22	13.07	13.50	13.89	12.89	13.48	14.16
Natural Gas										
Lower 48 Average Wellhead Price¹ (1999 dollars per thousand cubic feet)	2.08	2.49	2.69	3.08	2.59	2.83	3.20	2.66	3.13	3.68
Dry Production (trillion cubic feet)³										
U.S. Total	18.67	22.27	23.14	24.16	24.63	26.24	27.86	26.74	29.04	30.38
Lower 48 Onshore	12.83	15.38	16.29	17.28	17.77	19.04	20.48	19.50	21.26	22.09
Associated-Dissolved ⁴	1.80	1.31	1.33	1.35	1.29	1.32	1.36	1.37	1.38	1.39
Non-Associated	11.03	14.07	14.96	15.93	16.48	17.72	19.12	18.13	19.88	20.69
Conventional	6.64	8.26	8.30	8.56	10.05	10.37	10.55	10.78	11.38	11.58
Unconventional	4.39	5.80	6.66	7.37	6.43	7.36	8.57	7.35	8.51	9.11
Lower 48 Offshore	5.43	6.39	6.34	6.37	6.33	6.66	6.84	6.68	7.21	7.71
Associated-Dissolved ⁴	0.93	1.07	1.08	1.08	1.02	1.04	1.06	0.99	1.01	1.04
Non-Associated	4.50	5.31	5.26	5.29	5.31	5.63	5.78	5.69	6.19	6.67
Alaska	0.42	0.50	0.50	0.51	0.53	0.54	0.55	0.56	0.57	0.58
Lower 48 End of Year Dry Reserves³ (trillion cubic feet)	157.41	164.09	174.82	187.72	173.37	183.82	197.83	182.29	190.07	199.63
Supplemental Gas Supplies (trillion cubic feet)⁵ ..	0.10	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Total Lower 48 Wells (thousands)	17.94	26.21	28.63	33.62	29.47	31.62	33.51	34.38	39.14	45.45

¹Represents lower 48 onshore and offshore supplies.

²Includes lease condensate.

³Marketed production (wet) minus extraction losses.

⁴Gas which occurs in crude oil reserves either as free gas (associated) or as gas in solution with crude oil (dissolved).

⁵Synthetic natural gas, propane air, coke oven gas, refinery gas, biomass gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural gas.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999 lower 48 onshore, lower 48 offshore, and Alaska crude oil production: Energy Information Administration (EIA), *Petroleum Supply Annual 1999*, DOE/EIA-0340(99/1) (Washington, DC, June 2000). 1999 natural gas lower 48 average wellhead price, Alaska and total natural gas production, and supplemental gas supplies: EIA, *Natural Gas Monthly*, DOE/EIA-0130(2000/06) (Washington, DC, June 2000). Other 1999 values: EIA, Office of Integrated Analysis and Forecasting. Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B16. Coal Supply, Disposition, and Prices
(Million Short Tons per Year, Unless Otherwise Noted)

Supply, Disposition, and Prices	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Production¹										
Appalachia	437	400	409	423	391	404	409	385	392	408
Interior	166	168	171	172	167	169	163	154	152	169
West	502	674	692	717	702	720	780	740	787	883
East of the Mississippi	546	526	537	551	518	534	533	507	512	541
West of the Mississippi	559	717	735	761	741	760	819	772	819	920
Total	1105	1243	1273	1312	1259	1294	1352	1279	1331	1461
Net Imports										
Imports	9	17	17	17	18	18	18	20	20	20
Exports	58	58	58	58	54	54	54	56	56	56
Total	-49	-40	-40	-40	-35	-35	-35	-36	-36	-36
Total Supply²	1056	1203	1232	1272	1224	1259	1317	1243	1295	1424
Consumption by Sector										
Residential and Commercial	5	5	5	6	5	5	6	5	5	6
Industrial ³	79	83	84	87	83	85	88	83	86	91
Coke Plants	28	23	23	23	21	21	21	19	19	19
Electric Generators ⁴	923	1091	1122	1159	1117	1149	1203	1138	1186	1311
Total	1035	1202	1235	1274	1226	1261	1318	1245	1297	1426
Discrepancy and Stock Change⁵	21	0	-2	-2	-2	-2	-1	-2	-2	-2
Average Minemouth Price										
(1999 dollars per short ton)	16.98	13.74	13.83	13.93	13.23	13.38	13.28	12.79	12.70	12.80
(1999 dollars per million Btu)	0.81	0.67	0.68	0.68	0.65	0.66	0.65	0.63	0.63	0.64
Delivered Prices (1999 dollars per short ton)⁶										
Industrial	31.43	28.17	28.40	28.79	27.11	27.49	27.92	26.12	26.48	27.22
Coke Plants	44.25	41.10	41.25	41.58	39.45	39.81	40.13	38.30	38.57	39.05
Electric Generators										
(1999 dollars per short ton)	24.69	20.86	21.04	21.45	19.96	20.25	20.65	19.11	19.45	19.83
(1999 dollars per million Btu)	1.21	1.04	1.05	1.07	1.00	1.01	1.04	0.96	0.98	1.01
Average	25.74	21.75	21.92	22.31	20.77	21.06	21.45	19.87	20.19	20.56
Exports ⁷	37.45	35.38	35.53	35.88	34.02	34.38	34.79	32.82	33.09	33.64

¹Includes anthracite, bituminous coal, lignite, and waste coal delivered to independent power producers. Waste coal deliveries totaled 8.5 million tons in 1995, 8.8 million tons in 1996, 8.1 million tons in 1997, 8.6 million tons in 1998, and are projected to reach 9.6 million tons in 1999, and 12.2 million tons in 2000.

²Production plus net imports and net storage withdrawals.

³Includes consumption by cogenerators.

⁴Includes all electric power generators except cogenerators, which produce electricity and other useful thermal energy. Includes small power producers and exempt wholesale generators.

⁵Balancing item: the sum of production, net imports, and net storage minus total consumption.

⁶Sectoral prices weighted by consumption tonnage; weighted average excludes residential/ commercial prices and export free-alongside-ship (f.a.s.) prices.

⁷F.a.s. price at U.S. port of exit.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999 data based on Energy Information Administration (EIA), *Quarterly Coal Report*, DOE/EIA-0121(2000/1Q) (Washington, DC, August 2000) and EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A. Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B17. Renewable Energy Generating Capability and Generation
(Gigawatts, Unless Otherwise Noted)

Capacity and Generation	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Electric Generators¹										
(excluding cogenerators)										
Net Summer Capability										
Conventional Hydropower	78.14	78.74	78.74	78.74	78.74	78.74	78.74	78.74	78.74	78.74
Geothermal ²	2.87	4.03	4.34	4.37	4.08	4.41	4.61	4.08	4.41	4.74
Municipal Solid Waste ³	2.59	4.03	4.20	4.33	4.40	4.57	4.70	4.54	4.72	4.85
Wood and Other Biomass ⁴	1.52	2.04	2.04	2.04	2.33	2.33	2.33	2.37	2.37	2.37
Solar Thermal	0.33	0.40	0.40	0.40	0.44	0.44	0.44	0.48	0.48	0.48
Solar Photovoltaic	0.01	0.21	0.21	0.21	0.37	0.37	0.37	0.54	0.54	0.54
Wind	2.60	5.51	5.51	5.51	5.70	5.70	5.70	5.73	5.78	5.81
Total	88.07	94.95	95.44	95.60	96.05	96.55	96.88	96.49	97.04	97.53
Generation (billion kilowatthours)										
Conventional Hydropower	307.43	298.95	298.99	299.04	298.39	298.45	298.53	297.85	297.94	298.06
Geothermal ²	13.07	22.80	25.27	25.48	23.24	25.81	27.38	23.26	25.83	28.47
Municipal Solid Waste ³	18.05	28.65	30.00	31.09	31.49	32.88	33.94	32.56	33.96	35.03
Wood and Other Biomass ⁴	9.49	21.01	21.59	21.24	21.51	23.21	22.77	22.85	22.15	21.81
Dedicated Plants	7.56	10.88	10.88	10.89	12.99	12.99	13.00	13.34	13.35	13.36
Cofiring	1.93	10.13	10.71	10.35	8.52	10.22	9.77	9.52	8.80	8.45
Solar Thermal	0.89	1.11	1.11	1.11	1.24	1.24	1.24	1.37	1.37	1.37
Solar Photovoltaic	0.03	0.51	0.51	0.51	0.92	0.92	0.92	1.36	1.36	1.36
Wind	4.46	12.33	12.33	12.33	12.84	12.84	12.84	12.93	13.10	13.19
Total	353.42	385.36	389.80	390.80	389.62	395.35	397.62	392.18	395.71	399.28
Cogenerators⁵										
Net Summer Capability										
Municipal Solid Waste	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Biomass	4.65	5.72	6.06	6.52	6.19	6.85	7.51	6.50	7.54	8.61
Total	5.35	6.41	6.76	7.21	6.89	7.55	8.21	7.20	8.23	9.31
Generation (billion kilowatthours)										
Municipal Solid Waste	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03
Biomass	27.08	33.06	35.01	37.56	35.76	39.55	43.33	37.54	43.52	49.68
Total	31.11	37.08	39.03	41.59	39.78	43.58	47.35	41.57	47.55	53.71
Other End-Use Generators⁶										
Net Summer Capability										
Conventional Hydropower ⁷	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar Photovoltaic	0.01	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Total	1.00	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
Generation (billion kilowatthours)										
Conventional Hydropower ⁷	4.57	4.43	4.43	4.43	4.42	4.42	4.42	4.41	4.41	4.41
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar Photovoltaic	0.02	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Total	4.59	5.18	5.18	5.18	5.18	5.18	5.18	5.17	5.17	5.17

¹Includes grid-connected utilities and nonutilities other than cogenerators. These nonutility facilities include small power producers and exempt wholesale generators.

²Includes hydrothermal resources only (hot water and steam).

³Includes landfill gas.

⁴Includes projections for energy crops after 2010.

⁵Cogenerators produce electricity and other useful thermal energy.

⁶Includes 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. Excludes off-grid photovoltaics and other generators not connected to the distribution or transmission systems.

⁷Represents own-use industrial hydroelectric power.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports. Net summer capability has been estimated for nonutility generators for AEO2001. Net summer capability is used to be consistent with electric utility capacity estimates. Additional retirements are determined on the basis of the size and age of the units.

Sources: 1999 electric utility capability: Energy Information Administration (EIA), Form EIA-860A: "Annual Electric Generator Report - Utility," 1999 nonutility and cogenerator capability: EIA, Form EIA-860B: "Annual Electric Generator Report - Nonutility," 1999 generation: EIA, *Annual Energy Review 1999*, DOE/EIA-0384(99) (Washington, DC, July 2000). Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B18. Renewable Energy Consumption by Sector and Source
(Quadrillion Btu per Year)

Sector and Source	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Marketed Renewable Energy²										
Residential	0.41	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44
Wood	0.41	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44
Commercial	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Biomass	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Industrial³	2.15	2.52	2.64	2.82	2.66	2.86	3.10	2.78	3.08	3.44
Conventional Hydroelectric	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Municipal Solid Waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biomass	1.97	2.33	2.46	2.63	2.47	2.68	2.91	2.60	2.90	3.25
Transportation	0.12	0.21	0.21	0.22	0.22	0.23	0.24	0.23	0.24	0.26
Ethanol used in E85 ⁴	0.00	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04
Ethanol used in Gasoline Blending	0.12	0.18	0.19	0.20	0.19	0.20	0.20	0.20	0.21	0.22
Electric Generators⁵	3.94	4.48	4.64	4.59	4.54	4.71	4.71	4.58	4.66	4.75
Conventional Hydroelectric	3.17	3.08	3.08	3.08	3.07	3.07	3.07	3.06	3.06	3.06
Geothermal	0.38	0.67	0.81	0.75	0.69	0.82	0.81	0.70	0.77	0.84
Municipal Solid Waste ⁶	0.25	0.39	0.41	0.42	0.43	0.45	0.46	0.44	0.46	0.48
Biomass	0.09	0.20	0.21	0.20	0.20	0.22	0.22	0.22	0.21	0.21
Dedicated Plants	0.07	0.10	0.10	0.10	0.12	0.12	0.12	0.13	0.13	0.13
Cofiring	0.02	0.10	0.10	0.10	0.08	0.10	0.09	0.09	0.08	0.08
Solar Thermal	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03
Solar Photovoltaic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wind	0.05	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14
Total Marketed Renewable Energy	6.70	7.72	8.01	8.15	7.93	8.32	8.56	8.11	8.51	8.97
Non-Marketed Renewable Energy⁷										
Selected Consumption										
Residential	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.04	0.04
Solar Hot Water Heating	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Geothermal Heat Pumps	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Solar Photovoltaic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Solar Thermal	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
Solar Photovoltaic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethanol										
From Corn	0.12	0.18	0.19	0.20	0.18	0.19	0.20	0.16	0.17	0.18
From Cellulose	0.00	0.02	0.02	0.02	0.04	0.04	0.04	0.07	0.07	0.08
Total	0.12	0.21	0.21	0.22	0.22	0.23	0.24	0.23	0.24	0.26

¹Actual heat rates used to determine fuel consumption for all renewable fuels except hydropower, solar, and wind. Consumption at hydroelectric, solar, and wind facilities determined by using the fossil fuel equivalent of 10,280 Btu per kilowatt-hour.

²Includes nonelectric renewable energy groups for which the energy source is bought and sold in the marketplace, although all transactions may not necessarily be marketed, and marketed renewable energy inputs for electricity entering the marketplace on the electric power grid. Excludes electricity imports; see Table B8.

³Includes all electricity production by industrial and other cogenerators for the grid and for own use.

⁴Excludes motor gasoline component of E85.

⁵Includes renewable energy delivered to the grid from electric utilities and nonutilities. Renewable energy used in generating electricity for own use is included in the individual sectoral electricity energy consumption values.

⁶Includes landfill gas.

⁷Includes selected renewable energy consumption data for which the energy is not bought or sold, either directly or indirectly as an input to marketed energy. The Energy Information Administration does not estimate or project total consumption of nonmarketed renewable energy.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999 ethanol: Energy Information Administration (EIA), *Annual Energy Review 1999*, DOE/EIA-0384(99) (Washington, DC, July 2000). 1999 electric generators: EIA, Form EIA-860A: "Annual Electric Generator Report - Utility" and Form EIA-860B: "Annual Electric Generator Report - Nonutility." Other 1999: EIA, Office of Integrated Analysis and Forecasting. Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B19. Carbon Dioxide Emissions by Sector and Source
(Million Metric Tons Carbon Equivalent per Year)

Sector and Source	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Residential										
Petroleum	26.0	24.5	24.4	24.4	23.6	23.4	23.5	23.1	22.9	22.9
Natural Gas	69.5	81.2	82.0	82.2	84.3	86.2	87.2	88.0	90.8	91.9
Coal	1.1	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2
Electricity	192.6	234.6	238.2	240.9	251.2	255.2	258.6	266.8	273.2	281.5
Total	289.3	341.6	345.9	348.9	360.4	366.2	370.6	379.1	388.1	397.5
Commercial										
Petroleum	13.7	12.8	13.1	13.4	12.7	13.1	13.6	12.4	12.9	13.5
Natural Gas	45.4	54.6	55.9	56.8	56.1	58.3	60.2	56.6	59.4	61.9
Coal	1.7	1.8	1.9	1.9	1.8	1.9	2.0	1.8	2.0	2.1
Electricity	182.1	227.0	234.4	241.4	243.2	253.0	263.3	251.1	263.9	282.8
Total	242.9	296.2	305.3	313.5	313.8	326.3	339.0	322.0	338.2	360.2
Industrial¹										
Petroleum	104.2	100.0	104.7	112.3	102.1	109.9	118.4	105.4	115.5	128.1
Natural Gas ²	141.6	151.6	157.6	165.6	157.2	166.8	178.5	161.5	175.1	190.9
Coal	55.9	64.7	66.3	69.1	63.9	66.2	69.9	63.1	66.4	71.6
Electricity	178.8	190.3	200.8	217.8	198.1	212.4	233.1	206.9	226.6	260.1
Total	480.4	506.5	529.4	564.9	521.3	555.2	599.9	536.9	583.6	650.7
Transportation										
Petroleum ³	485.8	586.3	608.5	634.5	622.5	657.3	693.8	654.1	704.9	757.6
Natural Gas ⁴	9.5	13.8	14.3	14.8	15.2	16.2	17.1	16.6	18.0	19.0
Other ⁵	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Electricity	2.9	5.5	5.7	5.8	6.7	6.9	7.1	7.6	7.8	8.2
Total⁶	498.2	605.7	628.5	655.3	644.5	680.5	718.1	678.4	730.8	784.9
Total Carbon Dioxide Emissions by Delivered Fuel										
Petroleum ³	629.7	723.6	750.6	784.7	760.9	803.7	849.2	795.0	856.1	922.1
Natural Gas	266.0	301.1	309.8	319.5	312.8	327.5	343.1	322.8	343.3	363.6
Coal	58.8	67.8	69.5	72.4	67.1	69.4	73.1	66.2	69.6	74.9
Other ⁵	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Electricity	556.3	657.4	679.1	706.0	699.2	727.5	762.1	732.3	771.5	832.6
Total³	1510.8	1750.0	1809.1	1882.6	1840.1	1928.1	2027.6	1916.4	2040.6	2193.3
Electric Generators⁶										
Petroleum	20.0	3.3	3.4	4.0	3.4	3.4	3.6	3.4	3.7	4.5
Natural Gas	45.8	96.0	101.8	109.3	125.3	136.5	146.3	150.1	166.3	165.7
Coal	490.5	558.1	574.0	592.7	570.5	587.6	612.2	578.8	601.5	662.4
Total	556.3	657.4	679.1	706.0	699.2	727.5	762.1	732.3	771.5	832.6
Total Carbon Dioxide Emissions by Primary Fuel⁷										
Petroleum ³	649.7	726.9	754.0	788.7	764.3	807.1	852.8	798.4	859.9	926.6
Natural Gas	311.8	397.1	411.5	428.8	438.1	463.9	489.3	472.9	509.6	529.3
Coal	549.3	625.9	643.5	665.1	637.6	657.0	685.4	645.0	671.1	737.4
Other ⁵	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total³	1510.8	1750.0	1809.1	1882.6	1840.1	1928.1	2027.6	1916.4	2040.6	2193.3
Carbon Dioxide Emissions (tons carbon equivalent per person)										
	5.5	6.0	6.0	6.1	6.1	6.2	6.3	6.2	6.3	6.5

¹Includes consumption by cogenerators.

²Includes lease and plant fuel.

³This includes international bunker fuel which, by convention are excluded from the international accounting of carbon dioxide emissions. In the years from 1990 through 1998, international bunker fuels accounted for 25 to 30 million metric tons carbon equivalent of carbon dioxide annually.

⁴Includes pipeline fuel natural gas and compressed natural gas used as vehicle fuel.

⁵Includes methanol and liquid hydrogen.

⁶Includes all electric power generators except cogenerators, which produce electricity and other useful thermal energy. Includes small power producers and exempt wholesale generators. Does not include emissions from the nonbiogenic component of municipal solid waste because under international guidelines these are accounted for as waste not energy.

⁷Emissions from electric power generators are distributed to the primary fuels.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999 emissions and emission factors: Energy Information Administration (EIA), *Emissions of Greenhouse Gases in the United States 1999*, DOE/EIA-0573(99) (Washington, DC, October 2000). Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B20. Macroeconomic Indicators
(Billion 1996 Chain-Weighted Dollars, Unless Otherwise Noted)

Indicators	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
GDP Chain-Type Price Index (1996=1.000)	1.045	1.391	1.304	1.203	1.592	1.440	1.303	1.907	1.680	1.472
Real Gross Domestic Product	8876	12000	12667	13463	13495	14635	15744	14757	16515	18202
Real Consumption	5990	8143	8535	8911	9222	9934	10442	10198	11312	12144
Real Investment	1611	2636	2917	3215	3118	3613	4020	3407	4252	4921
Real Government Spending	1536	1767	1877	1941	1863	2022	2122	1976	2193	2339
Real Exports	1037	2278	2445	2698	3104	3465	3908	4048	4757	5493
Real Imports	1356	2803	3084	3181	3734	4336	4506	4811	5986	6366
Real Disposable Personal Income	6363	8537	8928	9356	9726	10361	10977	10907	11842	12739
AA Utility Bond Rate (percent)	7.05	9.90	8.76	7.95	9.81	8.60	7.56	11.99	9.51	7.95
Real Yield on Government 10 Year Bonds (percent)	4.75	5.41	5.59	5.53	5.59	5.55	5.17	6.99	5.43	4.88
Real Utility Bond Rate (percent)	5.58	7.27	6.90	6.47	6.97	6.49	5.89	8.08	6.09	5.23
Energy Intensity (thousand Btu per 1996 dollar of GDP)										
Delivered Energy	8.08	6.93	6.79	6.67	6.45	6.27	6.16	6.14	5.89	5.75
Total Energy	10.84	9.21	9.02	8.81	8.53	8.25	8.06	8.07	7.70	7.47
Consumer Price Index (1982-84=1.00)	1.67	2.36	2.20	2.03	2.78	2.49	2.25	3.42	2.95	2.59
Unemployment Rate (percent)	4.22	5.39	4.94	4.41	4.88	4.32	4.31	5.04	4.28	4.16
Housing Starts (millions)	2.02	1.60	1.89	2.09	1.75	2.10	2.31	1.66	2.09	2.35
Single-Family	1.34	0.97	1.17	1.30	1.03	1.28	1.42	0.96	1.27	1.44
Multifamily	0.34	0.35	0.41	0.48	0.41	0.48	0.55	0.38	0.46	0.56
Mobile Home Shipments	0.35	0.28	0.30	0.31	0.31	0.34	0.34	0.31	0.35	0.35
Commercial Floorspace, Total (billion square feet)	62.8	73.2	75.8	78.5	75.7	79.6	83.8	76.4	81.9	87.8
Gross Output (billion 1992 dollars)										
Total Industrial	4722	5942	6251	6769	6601	7093	7835	7359	8096	9251
Nonmanufacturing	972	1092	1162	1238	1157	1265	1364	1210	1370	1516
Manufacturing	3749	4850	5089	5531	5444	5828	6471	6149	6726	7735
Energy-Intensive Manufacturing	1078	1187	1248	1326	1230	1322	1422	1267	1396	1536
Non-Energy-Intensive Manufacturing ..	2672	3663	3841	4205	4214	4506	5049	4882	5330	6199
Unit Sales of Light-Duty Vehicles (millions)	16.89	15.11	15.88	16.76	16.08	17.18	18.30	15.32	17.44	19.71
Population (millions)										
Population with Armed Forces Overseas) ..	273.1	292.7	300.2	307.7	301.6	312.6	323.6	310.7	325.2	339.8
Population (aged 16 and over)	210.9	231.1	236.6	242.0	238.7	246.7	254.7	245.7	256.5	267.2
Employment, Non-Agriculture	128.5	145.4	149.7	155.2	150.0	157.3	163.7	153.9	165.1	175.1
Employment, Manufacturing	18.7	17.4	18.0	19.2	16.9	17.8	19.1	16.5	17.8	19.6
Labor Force	139.4	154.0	158.2	163.2	158.0	164.3	171.1	160.7	169.5	178.6

GDP = Gross domestic product.

Btu = British thermal unit.

Sources: 1999: Standard & Poor's DRI, Simulation T250200. Projections: Energy Information Administration, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.

Economic Growth Case Comparisons

Table B21. International Petroleum Supply and Disposition Summary
(Million Barrels per Day, Unless Otherwise Noted)

Supply and Disposition	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
World Oil Price (1999 dollars per barrel)¹	17.35	20.70	21.37	21.87	20.93	21.89	22.70	21.16	22.41	23.51
Production²										
OECD										
U.S. (50 states)	9.22	8.52	8.72	9.00	8.60	8.98	9.37	8.77	9.27	9.72
Canada	2.63	3.20	3.20	3.20	3.38	3.38	3.39	3.42	3.43	3.44
Mexico	3.37	3.98	3.99	4.00	3.90	3.91	3.92	3.79	3.81	3.82
OECD Europe ³	7.02	7.67	7.68	7.69	7.01	7.02	7.03	6.51	6.53	6.54
Other OECD	0.76	0.98	0.98	0.98	0.94	0.94	0.95	0.89	0.89	0.90
Total OECD	23.00	24.35	24.57	24.87	23.82	24.23	24.65	23.38	23.93	24.41
Developing Countries										
Other South & Central America	3.85	4.60	4.61	4.61	5.10	5.12	5.13	5.45	5.48	5.50
Pacific Rim	2.30	3.01	3.01	3.02	3.16	3.17	3.18	3.26	3.28	3.29
OPEC	29.87	41.84	42.16	42.76	48.62	48.94	49.54	57.18	57.64	58.55
Other Developing Countries	4.81	5.79	5.80	5.81	7.08	7.11	7.13	8.28	8.32	8.35
Total Developing Countries	40.84	55.23	55.58	56.20	63.97	64.35	64.99	74.17	74.71	75.69
Eurasia										
Former Soviet Union	7.40	10.66	10.68	10.69	12.94	12.98	13.02	14.27	14.33	14.39
Eastern Europe	0.24	0.38	0.38	0.38	0.42	0.42	0.42	0.45	0.45	0.45
China	3.21	3.52	3.53	3.53	3.61	3.63	3.64	3.62	3.63	3.65
Total Eurasia	10.85	14.56	14.59	14.61	16.97	17.02	17.07	18.33	18.42	18.49
Total Production	74.68	94.14	94.73	95.68	104.75	105.60	106.71	115.88	117.06	118.59
Consumption										
OECD										
U.S. (50 states)	19.50	21.83	22.70	23.83	22.89	24.26	25.75	23.85	25.83	28.00
U.S. Territories	0.34	0.41	0.41	0.41	0.44	0.44	0.43	0.47	0.46	0.46
Canada	1.92	2.11	2.10	2.08	2.19	2.16	2.13	2.20	2.17	2.13
Mexico	2.00	2.80	2.78	2.77	3.34	3.31	3.28	3.98	3.93	3.89
Japan	5.56	5.90	5.85	5.81	6.16	6.06	5.99	6.33	6.18	6.06
Australia and New Zealand	0.98	1.10	1.09	1.09	1.17	1.16	1.16	1.23	1.22	1.22
OECD Europe ³	14.50	15.87	15.81	15.77	16.28	16.18	16.10	16.64	16.50	16.39
Total OECD	44.81	50.03	50.74	51.77	52.47	53.56	54.84	54.72	56.29	58.14
Developing Countries										
Other South and Central America	4.14	5.87	5.86	5.85	7.01	6.98	6.96	8.44	8.39	8.36
Pacific Rim	7.64	12.37	12.34	12.31	14.24	14.18	14.13	16.11	16.02	15.94
OPEC	5.68	7.78	7.78	7.78	9.24	9.24	9.24	10.99	10.99	10.99
Other Developing Countries	3.75	4.33	4.31	4.30	5.00	4.95	4.92	5.87	5.79	5.72
Total Developing Countries	21.22	30.36	30.29	30.24	35.48	35.35	35.25	41.40	41.19	41.02
Eurasia										
Former Soviet Union	3.64	5.31	5.29	5.28	6.36	6.33	6.30	7.60	7.55	7.51
Eastern Europe	1.53	1.69	1.69	1.68	1.75	1.75	1.74	1.79	1.78	1.77
China	4.31	7.05	7.02	6.99	9.00	8.92	8.86	10.67	10.55	10.45
Total Eurasia	9.48	14.05	13.99	13.95	17.11	16.99	16.90	20.06	19.88	19.74

Economic Growth Case Comparisons

Table B21. International Petroleum Supply and Disposition Summary (Continued)
(Million Barrels per Day, Unless Otherwise Noted)

Supply and Disposition	1999	Projections								
		2010			2015			2020		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Total Consumption	75.51	94.44	95.03	95.98	105.05	105.90	107.01	116.18	117.36	118.89
Non-OPEC Production	44.81	52.30	52.58	52.91	56.14	56.66	57.16	58.70	59.43	60.05
Net Eurasia Exports	1.37	0.50	0.59	0.65	-0.14	0.03	0.16	-1.73	-1.46	-1.24
OPEC Market Share	0.40	0.44	0.45	0.45	0.46	0.46	0.46	0.49	0.49	0.49

¹Average refiner acquisition cost of imported crude oil.

²Includes production of crude oil (including lease condensates), natural gas plant liquids, other hydrogen and hydrocarbons for refinery feedstocks, alcohol, liquids produced from coal and other sources, and refinery gains.

³OECD Europe includes the unified Germany.

OECD = Organization for Economic Cooperation and Development - Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States (including territories).
Pacific Rim = Hong Kong, Malaysia, Philippines, Singapore, South Korea, Taiwan, and Thailand.

OPEC = Organization of Petroleum Exporting Countries - Algeria, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

Eurasia = Albania, Bulgaria, China, Czech Republic, Hungary, Poland, Romania, Slovakia, the Former Soviet Union, and the Former Yugoslavia.

Note: Totals may not equal sum of components due to independent rounding. Data for 1999 are model results and may differ slightly from official EIA data reports.

Sources: 1999 data derived from: Energy Information Administration (EIA), *Short-Term Energy Outlook, September 2000*, <http://www.eia.doe.gov/pub/forecasting/steo/oldsteo/sep00.pdf>. Projections: EIA, AEO2001 National Energy Modeling System runs LM2001.D101600A, AEO2001.D101600A, and HM2001.D101600A.