

Appendix A
Results for the Carbon Reduction Cases

Table A1. Total Energy Supply and Disposition Summary
(Quadrillion Btu per Year, Unless Otherwise Noted)

Supply, Disposition, and Prices	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Production								
Crude Oil and Lease Condensate	13.71	12.74	12.72	12.65	12.71	12.59	12.70	12.50
Natural Gas Plant Liquids	2.46	2.53	2.56	2.50	2.59	2.64	2.62	2.83
Dry Natural Gas	19.55	22.03	22.24	21.74	22.53	22.89	22.72	24.43
Coal	22.64	25.83	24.73	23.55	21.02	17.99	18.65	11.04
Nuclear Power	7.20	6.95	7.29	7.29	7.30	7.36	7.45	7.45
Renewable Energy ¹	6.83	6.99	7.10	7.08	7.18	7.18	7.44	7.68
Other ²	1.33	0.58	0.58	0.52	0.52	0.52	0.51	0.52
Total	73.73	77.65	77.22	75.33	73.84	71.17	72.10	66.46
Imports								
Crude Oil ³	16.30	21.51	21.49	21.48	21.33	20.85	21.13	20.16
Petroleum Products ⁴	3.98	5.79	5.78	5.41	5.23	4.63	5.08	3.03
Natural Gas	2.93	4.87	4.88	4.80	4.93	5.04	5.32	5.65
Other Imports ⁵	0.57	1.04	0.52	0.53	0.52	0.55	0.47	0.50
Total	23.78	33.21	32.67	32.22	32.00	31.07	32.00	29.35
Exports								
Petroleum ⁶	2.04	1.99	2.02	1.99	1.88	1.94	1.90	1.66
Natural Gas	0.16	0.28	0.15	0.15	0.15	0.15	0.14	0.14
Coal	2.37	2.64	2.27	2.27	2.27	2.27	2.11	2.11
Total	4.57	4.91	4.44	4.41	4.30	4.36	4.14	3.91
Discrepancy⁷	0.82	-0.13	-0.13	-0.09	0.07	-0.13	0.26	-0.09
Consumption								
Petroleum Products ⁸	36.01	41.09	41.01	40.47	40.36	39.15	39.97	37.28
Natural Gas	22.43	26.51	26.85	26.29	27.18	27.66	27.74	29.81
Coal	20.90	23.50	22.75	21.61	19.28	16.09	17.29	9.27
Nuclear Power	7.20	6.95	7.29	7.29	7.30	7.36	7.45	7.45
Renewable Energy ¹	6.84	7.01	7.12	7.09	7.20	7.19	7.45	7.70
Other ⁹	0.39	0.77	0.30	0.30	0.30	0.30	0.30	0.30
Total	93.77	105.82	105.32	103.06	101.61	97.75	100.22	91.80
Net Imports - Petroleum	18.25	25.31	25.25	24.91	24.68	23.55	24.32	21.53
Prices (1996 dollars per unit)								
World Oil Price (dollars per barrel) ¹⁰	20.48	20.26	20.12	19.71	19.96	19.32	19.89	18.72
Gas Wellhead Price (dollars per Mcf) ¹¹	2.24	2.20	2.18	2.15	2.21	2.26	2.24	2.57
Coal Minemouth Price (dollars per ton)	18.50	15.03	15.39	15.42	16.10	16.51	16.36	18.20
Average Electric Price (cents per kwh)	6.8	6.0	6.1	6.6	7.4	8.2	7.9	10.3

Table A1. Total Energy Supply and Disposition Summary (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
12.40	12.32	12.15	12.14	11.93	12.00	11.64	10.96	10.59	10.43	10.44	10.33	10.02	9.73
2.82	2.88	2.85	3.11	3.11	3.11	2.74	3.24	3.41	3.39	3.57	3.52	3.37	3.30
24.33	24.79	24.58	26.67	26.67	26.50	26.41	27.66	29.05	28.88	30.27	29.93	28.52	27.96
26.75	21.71	21.87	13.69	13.69	7.21	6.85	28.15	17.30	17.52	9.08	9.04	3.51	3.54
6.17	6.68	6.68	6.98	7.11	7.41	7.36	3.80	5.06	4.99	5.90	5.92	7.41	7.16
7.25	7.42	7.42	7.70	7.73	8.41	9.33	7.56	8.26	8.14	9.73	9.67	12.89	13.63
0.57	0.53	0.53	0.56	0.56	0.75	0.73	0.64	0.63	0.63	0.66	0.60	0.87	0.84
80.29	76.32	76.08	70.85	70.79	65.39	65.06	82.01	74.30	73.98	69.65	69.01	66.59	66.16
22.09	22.08	22.20	21.94	21.73	20.31	21.45	24.73	24.47	24.70	24.67	24.80	24.13	24.03
7.77	7.07	7.07	5.34	5.98	3.54	3.68	9.26	8.14	7.92	7.42	7.66	4.96	5.90
5.12	5.12	5.11	5.49	5.56	5.94	5.92	5.50	5.80	5.77	6.10	6.07	6.37	6.30
1.05	0.43	0.44	0.44	0.47	0.34	0.39	1.08	0.47	0.47	0.49	0.50	0.41	0.42
36.03	34.70	34.82	33.21	33.75	30.13	31.44	40.57	38.87	38.86	38.67	39.02	35.87	36.65
1.75	1.90	1.82	1.87	1.80	1.68	1.71	1.69	1.67	1.63	1.67	1.70	1.52	1.53
0.29	0.14	0.14	0.14	0.14	0.14	0.14	0.32	0.14	0.14	0.14	0.14	0.14	0.14
2.88	2.28	2.28	2.28	2.28	1.95	1.95	3.29	2.37	2.37	2.37	2.37	1.92	1.92
4.93	4.32	4.24	4.29	4.22	3.77	3.79	5.30	4.18	4.14	4.18	4.21	3.58	3.59
-0.21	-0.22	-0.22	-0.20	-0.27	-0.08	0.31	-0.26	-0.34	-0.31	-0.34	-0.27	-0.12	-0.28
43.82	42.83	42.82	41.12	41.37	38.06	38.88	46.88	45.25	45.12	44.78	44.84	41.67	41.98
28.97	29.57	29.36	31.82	31.89	32.09	31.99	32.65	34.50	34.31	36.02	35.64	34.54	33.92
24.14	19.70	19.87	11.68	11.68	5.44	5.21	25.27	15.28	15.53	7.06	7.19	1.98	1.98
6.17	6.68	6.68	6.98	7.11	7.41	7.36	3.80	5.06	4.99	5.90	5.92	7.41	7.16
7.27	7.44	7.44	7.72	7.75	8.44	9.35	7.59	8.29	8.18	9.77	9.71	12.92	13.67
0.80	0.25	0.25	0.25	0.25	0.23	0.24	0.83	0.26	0.26	0.26	0.25	0.24	0.25
111.18	106.48	106.43	99.57	100.05	91.67	93.02	117.02	108.64	108.39	103.79	103.56	98.76	98.95
28.11	27.26	27.44	25.41	25.91	22.17	23.42	32.31	30.94	30.98	30.42	30.76	27.57	28.40
20.77	19.99	19.60	18.72	18.49	17.54	16.85	21.69	20.14	19.65	19.73	19.40	18.38	17.71
2.33	2.38	2.35	2.78	2.79	3.03	3.14	2.62	3.02	3.03	3.71	3.61	3.53	3.35
14.29	14.72	14.34	16.42	16.18	18.29	18.68	12.53	14.29	13.95	16.24	16.15	20.50	20.33
5.9	7.1	7.0	8.8	8.5	11.0	10.4	5.6	7.3	7.3	8.1	8.0	9.3	8.9

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 A18 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. Figures may differ from published data due to internal conversion factors.

Sources: 1996 natural gas values: Energy Information Administration (EIA), *Natural Gas Monthly*, DOE/EIA-0130(97/06) (Washington, DC, June 1997). 1996 coal minemouth price: *Coal Industry Annual 1996* DOE/EIA-0584(96) (Washington, DC, November 1997). Coal production and exports derived from: EIA, *Monthly Energy Review*, DOE/EIA-0035(97/08) (Washington, DC, August 1997). Other 1996 values: EIA, *Annual Energy Review 1996*, DOE/EIA-0384(96) (Washington, DC, July 1997). Projections: EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A2. Energy Consumption by Sector and Source
(Quadrillion Btu per Year, Unless Otherwise Noted)

Sector and Source	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Energy Consumption								
Residential								
Distillate Fuel	0.89	0.77	0.77	0.75	0.74	0.71	0.73	0.65
Kerosene	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.06
Liquefied Petroleum Gas	0.42	0.44	0.43	0.45	0.43	0.43	0.42	0.41
Petroleum Subtotal	1.40	1.28	1.28	1.27	1.23	1.20	1.22	1.13
Natural Gas	5.39	5.53	5.52	5.40	5.25	5.05	5.16	4.65
Coal	0.05	0.06	0.05	0.05	0.04	0.04	0.04	0.04
Renewable Energy ¹	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.62
Electricity	3.68	4.34	4.32	4.21	4.13	4.00	4.07	3.78
Delivered Energy	11.13	11.81	11.77	11.53	11.26	10.91	11.10	10.20
Electricity Related Losses	8.21	9.12	8.98	8.69	8.33	7.84	8.15	7.08
Total	19.34	20.92	20.75	20.22	19.59	18.75	19.25	17.28
Commercial								
Distillate Fuel	0.44	0.39	0.39	0.38	0.36	0.35	0.35	0.30
Residual Fuel	0.15	0.12	0.12	0.12	0.12	0.12	0.12	0.11
Kerosene	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Liquefied Petroleum Gas	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Motor Gasoline ²	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Petroleum Subtotal	0.71	0.64	0.64	0.63	0.61	0.60	0.60	0.54
Natural Gas	3.30	3.63	3.62	3.55	3.42	3.27	3.34	2.83
Coal	0.08	0.09	0.09	0.09	0.09	0.08	0.08	0.07
Renewable Energy ³	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	3.37	3.91	3.90	3.81	3.70	3.56	3.63	3.24
Delivered Energy	7.47	8.28	8.26	8.09	7.82	7.52	7.66	6.70
Electricity Related Losses	7.52	8.23	8.11	7.87	7.46	6.97	7.27	6.08
Total	14.98	16.51	16.37	15.96	15.29	14.49	14.93	12.77
Industrial⁴								
Distillate Fuel	1.17	1.33	1.33	1.31	1.33	1.31	1.33	1.33
Liquefied Petroleum Gas	2.12	2.28	2.28	2.23	2.25	2.22	2.24	2.22
Petrochemical Feedstock	1.28	1.39	1.39	1.35	1.36	1.34	1.35	1.31
Residual Fuel	0.34	0.35	0.35	0.34	0.34	0.33	0.34	0.31
Motor Gasoline ²	0.19	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Other Petroleum ⁵	4.12	4.56	4.55	4.50	4.44	4.32	4.35	4.08
Petroleum Subtotal	9.23	10.14	10.12	9.95	9.95	9.73	9.83	9.46
Natural Gas ⁶	9.96	10.97	10.97	10.76	11.11	10.96	11.14	11.03
Metallurgical Coal	0.85	0.76	0.76	0.74	0.75	0.68	0.74	0.65
Steam Coal	1.55	1.69	1.67	1.51	1.24	1.07	1.15	0.86
Net Coal Coke Imports	0.00	0.16	0.16	0.16	0.15	0.18	0.14	0.18
Coal Subtotal	2.40	2.60	2.58	2.41	2.13	1.93	2.04	1.69
Renewable Energy ⁷	1.82	2.11	2.11	2.09	2.10	2.10	2.09	2.08
Electricity	3.46	4.05	4.03	3.93	3.92	3.75	3.85	3.58
Delivered Energy	26.87	29.87	29.82	29.14	29.21	28.46	28.95	27.83
Electricity Related Losses	7.72	8.52	8.39	8.12	7.91	7.34	7.71	6.71
Total	34.59	38.39	38.22	37.26	37.12	35.80	36.66	34.54

Table A2. Energy Consumption by Sector and Source (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
0.73	0.70	0.69	0.65	0.65	0.59	0.59	0.66	0.61	0.61	0.59	0.59	0.53	0.54
0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.05	0.06
0.45	0.44	0.46	0.43	0.45	0.41	0.42	0.47	0.46	0.48	0.46	0.48	0.42	0.44
1.25	1.21	1.22	1.15	1.16	1.05	1.07	1.20	1.13	1.15	1.11	1.13	1.01	1.04
5.71	5.43	5.45	5.00	5.02	4.51	4.53	5.98	5.45	5.47	5.10	5.11	4.68	4.79
0.05	0.04	0.05	0.04	0.04	0.03	0.03	0.05	0.04	0.04	0.04	0.04	0.03	0.03
0.61	0.61	0.61	0.62	0.62	0.63	0.64	0.62	0.63	0.63	0.64	0.64	0.67	0.68
4.62	4.42	4.43	4.19	4.21	3.93	3.97	5.30	4.97	4.95	4.82	4.83	4.65	4.69
12.24	11.72	11.75	11.00	11.05	10.15	10.24	13.14	12.22	12.24	11.71	11.75	11.04	11.23
9.30	8.49	8.49	7.27	7.24	6.72	6.69	9.81	8.19	8.21	7.28	7.30	7.25	7.39
21.55	20.20	20.23	18.27	18.29	16.86	16.93	22.95	20.41	20.45	18.99	19.04	18.29	18.61
0.38	0.36	0.36	0.33	0.33	0.26	0.28	0.36	0.33	0.33	0.31	0.32	0.26	0.28
0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.11	0.11
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0.64	0.61	0.61	0.58	0.58	0.51	0.52	0.62	0.58	0.59	0.57	0.57	0.51	0.53
3.79	3.59	3.61	3.22	3.24	2.65	2.71	3.93	3.55	3.56	3.27	3.29	2.84	2.97
0.10	0.09	0.09	0.08	0.08	0.06	0.07	0.10	0.09	0.09	0.08	0.08	0.06	0.07
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.17	3.96	3.98	3.68	3.71	3.30	3.37	4.53	4.19	4.19	4.02	4.03	3.77	3.84
8.69	8.26	8.30	7.56	7.62	6.52	6.67	9.18	8.41	8.42	7.94	7.98	7.18	7.42
8.39	7.60	7.63	6.38	6.38	5.64	5.67	8.39	6.90	6.95	6.06	6.10	5.88	6.05
17.08	15.86	15.93	13.94	14.00	12.16	12.34	17.57	15.31	15.37	14.00	14.08	13.06	13.47
1.42	1.41	1.41	1.43	1.44	1.44	1.47	1.52	1.52	1.53	1.55	1.55	1.58	1.55
2.44	2.40	2.38	2.38	2.41	2.37	2.43	2.52	2.47	2.44	2.46	2.47	2.47	2.52
1.48	1.45	1.43	1.41	1.43	1.35	1.38	1.52	1.46	1.44	1.44	1.44	1.41	1.37
0.35	0.35	0.35	0.36	0.36	0.41	0.43	0.35	0.37	0.37	0.50	0.52	0.44	0.44
0.24	0.24	0.24	0.23	0.24	0.23	0.23	0.26	0.25	0.25	0.25	0.25	0.25	0.25
4.79	4.68	4.70	4.61	4.64	4.22	4.44	5.08	5.08	5.09	5.16	5.10	4.82	4.79
10.72	10.53	10.51	10.41	10.51	10.01	10.39	11.25	11.16	11.12	11.37	11.32	10.97	10.92
11.43	11.47	11.39	11.54	11.50	11.12	11.06	11.78	11.65	11.55	11.31	11.23	11.37	10.84
0.70	0.65	0.63	0.61	0.55	0.59	0.52	0.58	0.44	0.43	0.40	0.36	0.38	0.34
1.74	1.36	1.37	1.07	1.12	0.83	0.86	1.79	1.36	1.35	1.26	1.26	0.90	0.92
0.20	0.22	0.23	0.23	0.26	0.22	0.27	0.27	0.32	0.32	0.33	0.35	0.34	0.35
2.65	2.22	2.23	1.91	1.93	1.64	1.65	2.64	2.12	2.11	1.99	1.97	1.62	1.61
2.25	2.25	2.25	2.23	2.29	2.17	2.27	2.35	2.39	2.39	2.39	2.40	2.40	2.39
4.30	4.13	4.11	3.95	4.00	3.67	3.78	4.51	4.27	4.23	4.13	4.13	3.98	3.88
31.35	30.60	30.50	30.04	30.23	28.61	29.15	32.53	31.59	31.39	31.19	31.06	30.34	29.63
8.65	7.92	7.88	6.85	6.87	6.28	6.37	8.37	7.05	7.01	6.23	6.24	6.20	6.10
40.00	38.52	38.38	36.89	37.11	34.88	35.52	40.89	38.64	38.40	37.42	37.30	36.55	35.74

Table A2. Energy Consumption by Sector and Source (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Sector and Source	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Transportation								
Distillate Fuel ⁸	4.48	5.65	5.64	5.55	5.54	5.44	5.49	5.28
Jet Fuel ⁹	3.27	4.36	4.35	4.30	4.31	4.18	4.25	3.87
Motor Gasoline ²	14.94	17.04	17.02	16.85	16.81	16.17	16.69	15.12
Residual Fuel	0.90	1.10	1.10	1.09	1.10	1.09	1.09	1.09
Liquefied Petroleum Gas	0.04	0.13	0.13	0.13	0.13	0.13	0.13	0.12
Other Petroleum ¹⁰	0.29	0.32	0.32	0.32	0.32	0.31	0.32	0.31
Petroleum Subtotal	23.92	28.61	28.57	28.24	28.21	27.32	27.98	25.79
Pipeline Fuel Natural Gas	0.73	0.80	0.83	0.81	0.82	0.83	0.83	0.89
Compressed Natural Gas	0.01	0.18	0.18	0.17	0.17	0.16	0.17	0.15
Renewable Energy (E85) ¹¹	0.01	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Methanol ¹²	0.01	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Liquid Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.06	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Delivered Energy	24.73	29.81	29.81	29.45	29.45	28.55	29.22	27.06
Electricity Related Losses	0.13	0.17	0.17	0.17	0.17	0.16	0.16	0.15
Total	24.86	29.99	29.98	29.62	29.61	28.71	29.39	27.20
Delivered Energy Consumption for All Sectors								
Distillate Fuel	6.98	8.15	8.13	8.00	7.97	7.81	7.90	7.56
Kerosene	0.14	0.12	0.12	0.12	0.12	0.12	0.12	0.11
Jet Fuel ⁹	3.27	4.36	4.35	4.30	4.31	4.18	4.25	3.87
Liquefied Petroleum Gas	2.66	2.94	2.94	2.89	2.90	2.86	2.88	2.83
Motor Gasoline ²	15.16	17.29	17.27	17.09	17.06	16.41	16.93	15.36
Petrochemical Feedstock	1.28	1.39	1.39	1.35	1.36	1.34	1.35	1.31
Residual Fuel	1.39	1.57	1.57	1.55	1.55	1.53	1.55	1.51
Other Petroleum ¹³	4.37	4.85	4.84	4.79	4.74	4.61	4.65	4.36
Petroleum Subtotal	35.26	40.67	40.61	40.10	40.01	38.85	39.63	36.92
Natural Gas ⁵	19.39	21.11	21.12	20.68	20.77	20.28	20.64	19.55
Metallurgical Coal	0.85	0.76	0.76	0.74	0.75	0.68	0.74	0.65
Steam Coal	1.68	1.83	1.81	1.65	1.37	1.20	1.28	0.97
Net Coal Coke Imports	0.00	0.16	0.16	0.16	0.15	0.18	0.14	0.18
Coal Subtotal	2.53	2.75	2.73	2.55	2.26	2.06	2.16	1.80
Renewable Energy ¹⁴	2.44	2.79	2.79	2.76	2.78	2.78	2.77	2.77
Methanol ¹²	0.01	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Liquid Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	10.57	12.38	12.33	12.03	11.83	11.40	11.63	10.68
Delivered Energy	70.19	79.78	79.66	78.20	77.74	75.44	76.92	71.79
Electricity Related Losses	23.57	26.04	25.66	24.85	23.87	22.31	23.29	20.01
Total	93.77	105.82	105.32	103.06	101.61	97.75	100.22	91.80
Electric Generators¹⁵								
Distillate Fuel	0.07	0.08	0.05	0.04	0.04	0.03	0.04	0.05
Residual Fuel	0.67	0.34	0.35	0.33	0.31	0.27	0.31	0.31
Petroleum Subtotal	0.75	0.42	0.40	0.37	0.35	0.31	0.34	0.36
Natural Gas	3.04	5.40	5.73	5.61	6.41	7.38	7.10	10.26
Steam Coal	18.36	20.75	20.02	19.06	17.01	14.03	15.13	7.47
Nuclear Power	7.20	6.95	7.29	7.29	7.30	7.36	7.45	7.45
Renewable Energy ¹⁶	4.40	4.22	4.33	4.33	4.42	4.41	4.68	4.93
Electricity Imports ¹⁷	0.39	0.69	0.22	0.22	0.22	0.22	0.22	0.22
Total	34.14	38.43	37.99	36.89	35.70	33.71	34.93	30.69

Table A2. Energy Consumption by Sector and Source (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
6.03	5.91	5.92	5.73	5.79	5.49	5.58	6.38	6.15	6.14	5.93	5.89	5.77	5.64
4.98	4.91	4.92	4.68	4.78	4.18	4.40	5.93	5.78	5.82	5.68	5.70	5.35	5.45
18.03	17.57	17.54	16.55	16.53	14.71	14.81	19.03	18.08	17.92	17.49	17.27	15.59	15.85
1.27	1.26	1.27	1.26	1.27	1.25	1.27	1.56	1.56	1.57	1.56	1.56	1.57	1.57
0.20	0.20	0.20	0.19	0.19	0.17	0.17	0.27	0.26	0.26	0.25	0.25	0.23	0.24
0.34	0.34	0.34	0.33	0.34	0.32	0.34	0.37	0.36	0.37	0.36	0.36	0.37	0.37
30.86	30.19	30.19	28.75	28.90	26.11	26.57	33.54	32.19	32.07	31.27	31.03	28.88	29.12
0.87	0.90	0.89	0.96	0.99	0.95	0.95	0.98	1.05	1.05	1.10	1.10	1.05	1.05
0.25	0.25	0.24	0.23	0.23	0.21	0.21	0.33	0.32	0.32	0.31	0.30	0.29	0.29
0.12	0.12	0.12	0.13	0.13	0.11	0.11	0.17	0.18	0.17	0.18	0.18	0.16	0.16
0.14	0.15	0.15	0.14	0.14	0.13	0.13	0.22	0.22	0.22	0.21	0.21	0.20	0.20
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.13	0.12	0.12	0.12	0.12	0.12	0.12
32.35	31.70	31.70	30.30	30.49	27.60	28.07	35.37	34.08	33.96	33.19	32.95	30.69	30.95
0.21	0.19	0.19	0.17	0.17	0.16	0.16	0.23	0.20	0.21	0.18	0.19	0.18	0.18
32.55	31.90	31.89	30.47	30.66	27.76	28.23	35.60	34.29	34.16	33.38	33.13	30.87	31.13
8.55	8.38	8.39	8.14	8.21	7.77	7.92	8.91	8.62	8.61	8.39	8.35	8.14	8.00
0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.12	0.11	0.11	0.11	0.11	0.10	0.11
4.98	4.91	4.92	4.68	4.78	4.18	4.40	5.93	5.78	5.82	5.68	5.70	5.35	5.45
3.18	3.13	3.12	3.08	3.13	3.03	3.11	3.36	3.28	3.27	3.27	3.28	3.21	3.29
18.30	17.83	17.80	16.81	16.79	14.97	15.07	19.31	18.36	18.20	17.76	17.54	15.87	16.13
1.48	1.45	1.43	1.41	1.43	1.35	1.38	1.52	1.46	1.44	1.44	1.44	1.41	1.37
1.74	1.74	1.74	1.73	1.75	1.78	1.82	2.03	2.05	2.06	2.18	2.19	2.13	2.12
5.11	4.99	5.01	4.91	4.95	4.50	4.75	5.42	5.42	5.43	5.50	5.44	5.16	5.13
43.46	42.54	42.53	40.88	41.16	37.68	38.55	46.60	45.07	44.92	44.32	44.05	41.37	41.60
22.06	21.64	21.59	20.96	20.98	19.43	19.46	23.01	22.02	21.95	21.09	21.04	20.23	19.94
0.70	0.65	0.63	0.61	0.55	0.59	0.52	0.58	0.44	0.43	0.40	0.36	0.38	0.34
1.89	1.49	1.51	1.19	1.24	0.92	0.96	1.94	1.48	1.48	1.38	1.38	1.00	1.02
0.20	0.22	0.23	0.23	0.26	0.22	0.27	0.27	0.32	0.32	0.33	0.35	0.34	0.35
2.80	2.36	2.37	2.03	2.05	1.73	1.75	2.79	2.25	2.24	2.11	2.10	1.72	1.71
2.98	2.98	2.99	2.98	3.04	2.92	3.02	3.13	3.20	3.20	3.21	3.23	3.23	3.23
0.14	0.15	0.15	0.14	0.14	0.13	0.13	0.22	0.22	0.22	0.21	0.21	0.20	0.20
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13.19	12.61	12.62	11.92	12.02	10.98	11.22	14.47	13.55	13.49	13.09	13.11	12.51	12.53
84.63	82.28	82.24	78.90	79.39	72.87	74.13	90.21	86.30	86.01	84.04	83.74	79.25	79.23
26.55	24.20	24.19	20.67	20.66	18.79	18.88	26.80	22.35	22.38	19.76	19.82	19.51	19.72
111.18	106.48	106.43	99.57	100.05	91.67	93.02	117.02	108.64	108.39	103.79	103.56	98.76	98.95
0.07	0.04	0.04	0.03	0.03	0.10	0.09	0.07	0.04	0.04	0.37	0.70	0.20	0.29
0.29	0.25	0.25	0.21	0.18	0.28	0.24	0.21	0.14	0.15	0.09	0.09	0.10	0.09
0.36	0.29	0.29	0.24	0.21	0.38	0.33	0.28	0.18	0.19	0.47	0.79	0.30	0.38
6.91	7.93	7.78	10.86	10.91	12.66	12.53	9.64	12.49	12.37	14.93	14.60	14.32	13.97
21.35	17.34	17.50	9.65	9.63	3.71	3.46	22.48	13.04	13.29	4.95	5.10	0.25	0.27
6.17	6.68	6.68	6.98	7.11	7.41	7.36	3.80	5.06	4.99	5.90	5.92	7.41	7.16
4.30	4.46	4.46	4.74	4.71	5.52	6.33	4.46	5.10	4.98	6.56	6.48	9.69	10.43
0.66	0.10	0.10	0.10	0.10	0.10	0.10	0.61	0.04	0.04	0.04	0.04	0.04	0.04
39.74	36.81	36.81	32.58	32.68	29.78	30.10	41.27	35.90	35.87	32.85	32.92	32.02	32.26

Table A2. Energy Consumption by Sector and Source (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Sector and Source	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Total Energy Consumption								
Distillate Fuel	7.06	8.22	8.17	8.05	8.01	7.84	7.94	7.61
Kerosene	0.14	0.12	0.12	0.12	0.12	0.12	0.12	0.11
Jet Fuel ⁹	3.27	4.36	4.35	4.30	4.31	4.18	4.25	3.87
Liquefied Petroleum Gas	2.66	2.94	2.94	2.89	2.90	2.86	2.88	2.83
Motor Gasoline ²	15.16	17.29	17.27	17.09	17.06	16.41	16.93	15.36
Petrochemical Feedstock	1.28	1.39	1.39	1.35	1.36	1.34	1.35	1.31
Residual Fuel	2.07	1.92	1.92	1.87	1.86	1.81	1.86	1.82
Other Petroleum ¹³	4.37	4.85	4.84	4.79	4.74	4.61	4.65	4.36
Petroleum Subtotal	36.01	41.09	41.01	40.47	40.36	39.15	39.97	37.28
Natural Gas	22.43	26.51	26.85	26.29	27.18	27.66	27.74	29.81
Metallurgical Coal	0.85	0.76	0.76	0.74	0.75	0.68	0.74	0.65
Steam Coal	20.05	22.58	21.83	20.71	18.38	15.23	16.41	8.44
Net Coal Coke Imports	0.00	0.16	0.16	0.16	0.15	0.18	0.14	0.18
Coal Subtotal	20.90	23.50	22.75	21.61	19.28	16.09	17.29	9.27
Nuclear Power	7.20	6.95	7.29	7.29	7.30	7.36	7.45	7.45
Renewable Energy ¹⁸	6.84	7.01	7.12	7.09	7.20	7.19	7.45	7.70
Methanol ¹²	0.01	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Liquid Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity Imports ¹⁷	0.39	0.69	0.22	0.22	0.22	0.22	0.22	0.22
Total	93.77	105.82	105.32	103.06	101.61	97.75	100.22	91.80
Energy Use and Related Statistics								
Delivered Energy Use	70.19	79.78	79.66	78.20	77.74	75.44	76.92	71.79
Total Energy Use	93.77	105.83	105.34	103.07	101.63	97.76	100.23	91.81
Total Carbon Emissions (million metric tons)	1462.90	1690.92	1674.61	1629.78	1579.45	1482.19	1529.60	1302.75

Table A2. Energy Consumption by Sector and Source (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Projections														
2010							2020							
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%		
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start	
	8.62	8.42	8.43	8.17	8.24	7.87	8.02	8.98	8.65	8.65	8.76	9.05	8.34	8.30
	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.12	0.11	0.11	0.11	0.11	0.10	0.11
	4.98	4.91	4.92	4.68	4.78	4.18	4.40	5.93	5.78	5.82	5.68	5.70	5.35	5.45
	3.18	3.13	3.12	3.08	3.13	3.03	3.11	3.36	3.28	3.27	3.27	3.28	3.21	3.29
	18.30	17.83	17.80	16.81	16.79	14.97	15.07	19.31	18.36	18.20	17.76	17.54	15.87	16.13
	1.48	1.45	1.43	1.41	1.43	1.35	1.38	1.52	1.46	1.44	1.44	1.44	1.41	1.37
	2.03	1.99	1.99	1.94	1.93	2.05	2.05	2.24	2.19	2.21	2.27	2.28	2.23	2.21
	5.11	4.99	5.01	4.91	4.95	4.50	4.75	5.42	5.42	5.43	5.50	5.44	5.16	5.13
	43.82	42.83	42.82	41.12	41.37	38.06	38.88	46.88	45.25	45.12	44.78	44.84	41.67	41.98
	28.97	29.57	29.36	31.82	31.89	32.09	31.99	32.65	34.50	34.31	36.02	35.64	34.54	33.92
	0.70	0.65	0.63	0.61	0.55	0.59	0.52	0.58	0.44	0.43	0.40	0.36	0.38	0.34
	23.24	18.83	19.01	10.85	10.87	4.63	4.42	24.42	14.52	14.77	6.33	6.48	1.26	1.29
	0.20	0.22	0.23	0.23	0.26	0.22	0.27	0.27	0.32	0.32	0.33	0.35	0.34	0.35
	24.14	19.70	19.87	11.68	11.68	5.44	5.21	25.27	15.28	15.53	7.06	7.19	1.98	1.98
	6.17	6.68	6.68	6.98	7.11	7.41	7.36	3.80	5.06	4.99	5.90	5.92	7.41	7.16
	7.27	7.44	7.44	7.72	7.75	8.44	9.35	7.59	8.29	8.18	9.77	9.71	12.92	13.67
	0.14	0.15	0.15	0.14	0.14	0.13	0.13	0.22	0.22	0.22	0.21	0.21	0.20	0.20
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.66	0.10	0.10	0.10	0.10	0.10	0.10	0.61	0.04	0.04	0.04	0.04	0.04	0.04
	111.18	106.48	106.43	99.57	100.05	91.67	93.02	117.02	108.64	108.39	103.79	103.56	98.76	98.95
	84.63	82.28	82.24	78.90	79.39	72.87	74.13	90.21	86.30	86.01	84.04	83.74	79.25	79.23
	111.19	106.49	106.44	99.58	100.06	91.68	93.03	117.01	108.64	108.38	103.79	103.55	98.75	98.94
	1790.62	1667.93	1669.84	1461.50	1466.00	1243.42	1249.40	1928.74	1668.05	1670.07	1467.78	1467.81	1250.80	1249.40

¹Includes wood used for residential heating. See Table A18 estimates of nonmarketed renewable energy consumption for geothermal heat pumps & solar thermal hot water heating.
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 A18 for estimates of nonmarketed renewable energy consumption for solar thermal hot water heating.
⁴Fuel consumption includes consumption for cogeneration.
⁵Includes petroleum coke, asphalt, road oil, lubricants, still gas, and miscellaneous petroleum products.
⁶Includes lease and plant fuel.
⁷Includes consumption of energy from hydroelectric, wood & wood waste, municipal solid waste, & other biomass; includes for cogeneration, both sales to the grid & for own use.
⁸Low sulfur diesel fuel.
⁹Includes naphtha and kerosene type.
¹⁰Includes aviation gas and lubricants.
¹¹E85 is 85 percent ethanol (renewable) and 15 percent motor gasoline(nonrenewable).
¹²Only M85 (85 percent methanol and 15 percent motor gasoline).
¹³Includes unfinished oils, natural gasoline, motor gasoline blending compounds, aviation gasoline, lubricants, still gas, asphalt, road oil, petroleum coke, and miscellaneous petroleum products.
¹⁴Includes 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 and solar thermal hot water heaters.
¹⁵Includes consumption of energy by all electric power generators for grid-connected power except cogenerators, which produce electricity and other useful thermal energy.
¹⁶Includes conventional hydroelectric, geothermal, wood and wood waste, municipal solid waste, other biomass, E85, wind, photovoltaic and solar thermal sources. Excludes cogeneration. Excludes net electricity imports.
¹⁷In 1996 approximately two-thirds of the U.S. electricity imports were provided by renewable sources (hydroelectricity); EIA does not project future proportions.
¹⁸Includes 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 and solar thermal hot water heaters.
 Btu = British thermal unit.
 Note: Totals may not equal sum of components due to independent rounding. Figures for 1996 may differ from published data due to internal conversion factors. Consumption values of 0.00 are values that round to 0.00, because they are less than 0.005.
Sources: 1996 natural gas lease, plant, and pipeline fuel values: Energy Information Administration, *Short-Term Energy Outlook, August 1997*. Online. <http://www.eia.doe.gov/emeu/steo/pub/upd/aug97/index.html> (August 21, 1997). 1996 electric utility fuel consumption: EIA, *Electric Power Annual 1996, Volume I*, DOE/EIA-0348(96)/1 (Washington, DC, August 1997). 1996 nonutility consumption estimates: EIA Form 867, "Annual Nonutility Power Producer Report." Other 1996 values: EIA, *Short-Term Energy Outlook August 1997*. Online. <http://www.eia.doe.gov/emeu/steo/pub/upd/aug97/index.html> (August 21, 1997). **Projections:** EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A3. Energy Prices by Sector and Source
(1996 Dollars per Million Btu)

Sector and Source	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Residential	12.86	12.18	12.37	13.22	14.92	16.32	15.84	20.75
Primary Energy ¹	6.63	6.26	6.33	6.72	7.52	8.27	7.99	10.68
Petroleum Products ²	8.51	9.18	9.28	9.67	10.51	11.25	11.01	13.56
Distillate Fuel	7.09	7.59	7.68	8.07	9.00	9.75	9.52	12.29
Liquefied Petroleum Gas	11.59	12.11	12.23	12.46	13.22	13.77	13.66	15.61
Natural Gas	6.19	5.63	5.69	6.07	6.85	7.59	7.31	10.00
Electricity	24.42	21.55	21.95	23.59	26.62	28.96	28.21	36.23
Commercial	12.84	11.62	11.84	12.87	14.68	16.28	15.72	21.24
Primary Energy ¹	5.26	4.81	4.88	5.26	6.07	6.82	6.54	9.29
Petroleum Products ²	5.56	5.76	5.86	6.25	7.19	7.93	7.71	10.43
Distillate Fuel	5.27	5.37	5.46	5.86	6.79	7.54	7.31	10.06
Residual Fuel	3.24	3.07	3.20	3.66	4.67	5.51	5.24	8.32
Natural Gas ³	5.28	4.73	4.79	5.16	5.93	6.67	6.39	9.11
Electricity	22.05	19.21	19.62	21.38	24.28	26.78	25.89	33.97
Industrial⁴	5.35	4.96	5.07	5.51	6.37	7.12	6.85	9.41
Primary Energy	3.99	3.75	3.83	4.16	4.88	5.50	5.28	7.48
Petroleum Products ²	5.58	5.21	5.28	5.49	6.09	6.51	6.41	8.00
Distillate Fuel	5.50	5.43	5.53	5.93	6.87	7.62	7.38	10.11
Liquefied Petroleum Gas	7.80	6.70	6.83	7.06	7.80	8.36	8.24	10.18
Residual Fuel	2.99	2.75	2.84	3.32	4.34	5.18	4.90	7.95
Natural Gas ⁵	2.96	2.80	2.88	3.22	3.93	4.64	4.36	6.89
Metallurgical Coal	1.77	1.63	1.76	2.43	3.60	4.70	4.28	8.16
Steam Coal	1.46	1.30	1.42	2.10	3.27	4.38	3.96	7.84
Electricity	13.37	11.57	11.83	12.92	14.61	16.15	15.56	20.39
Transportation	8.77	8.62	8.78	9.10	10.03	10.69	10.53	12.93
Primary Energy	8.76	8.61	8.77	9.09	10.02	10.68	10.52	12.92
Petroleum Products ²	8.76	8.61	8.76	9.09	10.02	10.68	10.52	12.92
Distillate Fuel ⁶	8.90	8.47	8.62	8.97	9.89	10.63	10.39	13.01
Jet Fuel ⁷	5.52	5.37	5.51	5.86	6.79	7.44	7.26	9.75
Motor Gasoline ⁸	9.89	9.92	10.10	10.41	11.35	12.00	11.85	14.17
Residual Fuel	2.55	2.70	2.80	3.27	4.30	5.12	4.84	7.92
Liquid Petroleum Gas ⁹	12.63	12.99	13.10	13.31	14.07	14.61	14.50	16.42
Natural Gas ¹⁰	5.42	5.82	5.88	6.27	6.98	7.69	7.41	9.96
E85 ¹¹	15.85	16.35	16.38	16.41	16.69	16.56	16.78	18.17
M85 ¹²	12.24	12.54	12.60	12.90	13.78	14.32	14.23	16.42
Electricity	15.33	13.44	13.56	13.82	13.93	14.34	14.06	15.53
Average End-Use Energy	8.65	8.21	8.36	8.89	9.97	10.86	10.56	13.62
Primary Energy	8.32	7.92	8.07	8.55	9.57	10.40	10.13	12.97
Electricity	20.00	17.49	17.85	19.34	21.82	23.96	23.20	30.08
Electric Generators¹³								
Fossil Fuel Average	1.54	1.50	1.62	2.23	3.32	4.34	3.97	7.25
Petroleum Products	3.25	3.44	3.38	3.89	4.91	5.78	5.47	8.54
Distillate Fuel	4.91	4.97	5.10	5.50	6.45	7.23	6.98	9.67
Residual Fuel	3.07	3.10	3.15	3.67	4.71	5.60	5.29	8.36
Natural Gas	2.64	2.62	2.69	3.03	3.74	4.48	4.24	6.86
Steam Coal	1.29	1.17	1.28	1.97	3.13	4.24	3.81	7.74

Table A3. Energy Prices by Sector and Source (Continued)
(1996 Dollars per Million Btu)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
12.24	14.61	14.32	18.11	17.59	23.29	22.24	12.32	16.06	15.99	18.14	17.87	21.52	20.42
6.24	7.32	7.24	9.18	9.04	12.27	11.86	6.42	8.32	8.27	9.61	9.48	11.91	11.13
9.54	10.54	10.49	11.94	11.71	15.03	14.33	9.72	11.19	11.01	11.83	11.69	14.51	13.61
7.78	8.86	8.77	10.47	10.19	13.85	13.04	7.82	9.44	9.33	10.21	9.99	13.06	12.16
12.50	13.29	13.21	14.27	14.00	16.79	16.18	12.49	13.61	13.26	13.99	13.90	16.39	15.43
5.56	6.64	6.55	8.58	8.45	11.65	11.30	5.80	7.76	7.73	9.16	9.03	11.37	10.62
21.36	25.63	25.07	31.29	30.22	38.98	36.96	20.37	26.37	26.37	29.20	28.80	33.34	32.02
11.51	14.16	13.86	17.99	17.44	23.82	22.67	11.10	15.07	14.98	17.16	16.91	20.69	19.43
4.74	5.82	5.72	7.71	7.56	10.91	10.47	4.70	6.60	6.55	7.88	7.75	10.28	9.48
5.99	7.07	6.97	8.64	8.35	11.98	11.20	6.12	7.70	7.52	8.40	8.20	11.30	10.35
5.57	6.65	6.56	8.26	7.98	11.62	10.82	5.66	7.24	7.10	7.98	7.77	10.85	9.94
3.18	4.43	4.28	6.26	5.91	10.02	9.18	3.38	5.23	5.09	6.06	5.83	9.33	8.32
4.61	5.67	5.58	7.60	7.47	10.72	10.36	4.57	6.49	6.46	7.87	7.74	10.12	9.36
18.87	23.21	22.66	28.85	27.85	36.43	34.63	17.67	23.61	23.50	26.21	25.88	30.13	28.66
5.12	6.26	6.14	7.92	7.71	10.79	10.25	5.15	6.92	6.80	7.83	7.70	9.93	9.25
3.96	4.86	4.77	6.26	6.09	8.90	8.42	4.16	5.62	5.49	6.44	6.31	8.52	7.85
5.46	6.05	5.96	6.87	6.70	8.95	8.41	5.58	6.41	6.19	6.75	6.60	8.49	7.88
5.68	6.76	6.66	8.35	8.09	11.70	10.90	5.86	7.40	7.22	8.10	7.88	10.97	10.06
7.01	7.79	7.73	8.76	8.52	11.37	10.79	6.99	8.12	7.72	8.47	8.42	10.87	9.99
2.94	4.17	4.03	5.96	5.66	9.65	8.83	3.16	4.97	4.82	5.74	5.53	8.91	7.99
2.98	3.96	3.87	5.74	5.60	8.65	8.30	3.25	5.06	5.03	6.35	6.24	8.50	7.80
1.58	3.28	3.15	5.69	5.35	10.36	9.54	1.51	4.00	3.92	5.05	4.95	9.19	8.22
1.26	2.96	2.83	5.37	5.03	10.03	9.21	1.18	3.67	3.59	4.72	4.62	8.83	7.86
11.28	13.86	13.59	17.12	16.59	21.51	20.49	10.31	13.83	13.79	15.38	15.19	17.67	16.90
8.75	9.84	9.69	11.22	10.96	14.19	13.43	8.59	10.05	9.83	10.67	10.42	13.22	12.34
8.74	9.83	9.68	11.21	10.95	14.18	13.42	8.57	10.04	9.82	10.66	10.41	13.22	12.34
8.73	9.82	9.67	11.20	10.94	14.18	13.41	8.55	10.02	9.80	10.63	10.38	13.20	12.31
8.49	9.58	9.50	11.18	10.92	14.39	13.63	8.22	9.75	9.55	10.42	10.21	13.34	12.43
5.62	6.69	6.57	8.15	7.88	11.20	10.47	5.76	7.32	7.18	8.01	7.80	10.73	9.88
10.12	11.25	11.07	12.55	12.33	15.44	14.71	10.01	11.46	11.23	12.05	11.79	14.53	13.62
2.90	4.16	4.02	5.96	5.66	9.66	8.85	3.08	4.92	4.78	5.70	5.53	8.96	8.06
13.18	13.95	13.85	14.89	14.64	17.36	16.77	12.76	13.88	13.56	14.27	14.19	16.61	15.69
6.53	7.60	7.47	9.39	9.19	12.32	11.82	7.17	8.95	8.88	10.15	10.03	12.20	11.50
16.73	16.79	16.63	16.39	16.12	19.61	18.62	16.58	16.20	15.98	16.54	16.16	19.09	17.96
12.63	13.54	13.33	14.71	14.42	17.21	16.43	12.69	13.86	13.62	14.42	14.21	16.74	15.85
13.27	13.78	13.68	14.74	14.37	15.91	15.29	12.39	12.77	12.86	13.15	13.01	13.27	13.05
8.31	9.76	9.59	11.73	11.43	15.17	14.41	8.27	10.39	10.26	11.43	11.23	13.98	13.17
8.04	9.38	9.22	11.16	10.88	14.38	13.66	7.98	9.90	9.75	10.80	10.60	13.24	12.46
17.22	20.92	20.48	25.70	24.83	32.19	30.52	16.31	21.44	21.42	23.77	23.47	27.21	26.14
1.55	3.14	3.02	5.49	5.27	8.96	8.52	1.68	4.22	4.16	5.90	5.76	8.52	7.77
3.67	4.87	4.74	6.71	6.47	10.48	9.71	4.03	5.94	5.80	7.36	7.23	10.28	9.42
5.21	6.35	6.24	8.03	7.75	11.14	10.36	5.36	6.99	6.80	7.52	7.31	10.38	9.47
3.29	4.63	4.48	6.52	6.26	10.24	9.46	3.56	5.67	5.51	6.72	6.62	10.06	9.28
2.82	3.81	3.73	5.70	5.59	8.63	8.32	3.20	4.97	4.95	6.31	6.15	8.48	7.73
1.11	2.81	2.68	5.23	4.88	9.95	9.12	1.00	3.48	3.39	4.52	4.42	8.80	7.83

Table A3. Energy Prices by Sector and Source (Continued)
(1996 Dollars per Million Btu)

Sector and Source	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Average Price to All Users¹⁴								
Petroleum Products ²	7.83	7.76	7.90	8.21	9.06	9.66	9.51	11.68
Distillate Fuel	7.84	7.71	7.86	8.22	9.15	9.89	9.66	12.30
Jet Fuel	5.52	5.37	5.51	5.86	6.79	7.44	7.26	9.75
Liquefied Petroleum Gas	8.53	7.89	8.01	8.27	8.98	9.55	9.42	11.33
Motor Gasoline ⁸	9.89	9.91	10.08	10.39	11.33	11.99	11.83	14.16
Residual Fuel	2.84	2.81	2.89	3.37	4.39	5.23	4.95	8.02
Natural Gas	4.14	3.72	3.77	4.12	4.79	5.47	5.21	7.65
Coal	1.32	1.18	1.30	1.98	3.14	4.26	3.82	7.75
E85 ¹¹	15.85	16.35	16.38	16.41	16.69	16.56	16.78	18.17
M85 ¹²	12.24	12.54	12.60	12.90	13.78	14.32	14.23	16.42
Electricity	20.00	17.49	17.85	19.34	21.82	23.96	23.20	30.08
Non-Renewable Energy Expenditures								
by Sector (Billion 1996 dollars)								
Residential	135.23	136.41	138.12	144.42	158.96	168.07	166.15	198.89
Commercial	95.84	96.20	97.75	103.98	114.83	122.37	120.32	142.21
Industrial	111.91	112.58	114.87	122.14	142.18	154.51	151.70	200.77
Transportation	210.43	248.75	253.09	259.75	286.57	296.18	298.41	339.68
Total Non-Renewable Expenditures	553.41	593.94	603.84	630.30	702.54	741.13	736.59	881.54
Transportation Renewable Expenditures	0.08	1.13	1.13	1.12	1.19	1.17	1.22	1.26
Total Expenditures	553.49	595.07	604.97	631.42	703.74	742.31	737.81	882.81

Table A3. Energy Prices by Sector and Source (Continued)
(1996 Dollars per Million Btu)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
7.94	8.91	8.79	10.14	9.90	12.83	12.12	7.88	9.18	8.97	9.69	9.45	12.02	11.22
7.81	8.91	8.82	10.50	10.24	13.72	12.95	7.67	9.21	9.01	9.79	9.49	12.73	11.78
5.62	6.69	6.57	8.15	7.88	11.20	10.47	5.76	7.32	7.18	8.01	7.80	10.73	9.88
8.29	9.05	9.02	10.00	9.77	12.52	11.95	8.32	9.44	9.09	9.80	9.75	12.11	11.22
10.11	11.23	11.06	12.53	12.31	15.43	14.69	10.00	11.45	11.22	12.04	11.78	14.51	13.61
2.98	4.24	4.10	6.04	5.73	9.76	8.94	3.15	4.99	4.86	5.77	5.59	9.02	8.11
3.76	4.71	4.63	6.45	6.32	9.31	8.99	3.96	5.69	5.67	6.95	6.82	9.09	8.39
1.12	2.82	2.70	5.24	4.90	9.97	9.14	1.01	3.50	3.42	4.57	4.46	8.84	7.87
16.73	16.79	16.63	16.39	16.12	19.61	18.62	16.58	16.20	15.98	16.54	16.16	19.09	17.96
12.63	13.54	13.33	14.71	14.42	17.21	16.43	12.69	13.86	13.62	14.42	14.21	16.74	15.85
17.22	20.92	20.48	25.70	24.83	32.19	30.52	16.31	21.44	21.42	23.77	23.47	27.21	26.14
142.47	162.27	159.55	187.98	183.46	221.60	213.62	154.21	186.09	185.61	200.87	198.49	223.12	215.48
100.04	116.91	114.91	136.02	132.86	155.24	151.15	101.88	126.71	126.14	136.19	134.93	148.56	144.08
121.43	145.88	142.36	181.59	178.03	238.74	231.22	125.47	164.58	160.61	184.55	181.28	231.62	210.67
273.12	301.43	296.89	328.53	322.71	379.60	365.31	292.00	329.71	321.39	340.63	330.09	392.18	368.74
637.05	726.49	713.71	834.12	817.06	995.18	961.31	673.57	807.09	793.75	862.23	844.78	995.49	938.97
1.97	2.01	1.97	2.07	2.02	2.18	2.10	2.81	2.86	2.79	2.93	2.86	3.02	2.93
639.03	728.51	715.68	836.18	819.08	997.35	963.41	676.38	809.95	796.55	865.16	847.64	998.51	941.91

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).

¹²Only M85 (85 percent methanol and 15 percent motor gasoline).

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

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: 1996 figures may differ from published data due to internal rounding.

Sources: 1996 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(96/13-97/4) (Washington, DC, 1996-97). 1996 prices for all other petroleum products are derived from the EIA, *State Energy Price and Expenditure Report 1994*, DOE/EIA-0376(94) (Washington, DC, June 1997). 1996 industrial gas delivered prices are based on EIA, *Manufacturing Energy Consumption Survey 1991*. 1996 residential and commercial natural gas delivered prices: EIA, *Natural Gas Monthly*, DOE/EIA-0130(97/6) (Washington, DC, June 1997). Other 1996 natural gas delivered prices: EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A. Values for 1996 coal prices have been estimated from EIA, *State Energy Price and Expenditure Report 1994*, DOE/EIA-0376(94) (Washington, DC, June 1997) by use of consumption quantities aggregated from EIA, *State Energy Data Report 1994*. Online. <ftp://ftp.eia.doe.gov/pub/state.data/021494.pdf> (August 26, 1997) and the *Coal Industry Annual 1996*, DOE/EIA-0584(96) (Washington, DC, November 1997). 1996 electricity prices for commercial, industrial, and transportation: EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D052199A, FD07BLW.D080398B, and EARLY07.D052199A. **Projections:** EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A4. Residential Sector Key Indicators and End-Use Consumption
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Key Indicators								
Households (millions)								
Single-Family	69.61	77.46	77.46	77.36	77.40	77.35	77.37	77.21
Multifamily	24.76	26.54	26.54	26.44	26.50	26.41	26.48	26.28
Mobile Homes	6.00	7.08	7.08	7.07	7.07	7.07	7.07	7.05
Total	100.37	111.08	111.08	110.87	110.97	110.83	110.92	110.54
Average House Square Footage	1649	1691	1691	1691	1691	1692	1691	1692
Energy Intensity (million Btu consumed per household)								
Delivered Energy Consumption	110.92	106.30	105.97	104.01	101.50	98.45	100.05	92.29
Electricity Related Losses	81.78	82.08	80.85	78.38	75.07	70.72	73.50	64.07
Total Energy Consumption	192.70	188.37	186.82	182.39	176.57	169.16	173.55	156.35
Delivered Energy Consumption by Fuel								
Electricity								
Space Heating	0.47	0.48	0.48	0.45	0.45	0.42	0.44	0.39
Space Cooling	0.46	0.51	0.51	0.48	0.48	0.45	0.47	0.41
Water Heating	0.37	0.37	0.37	0.36	0.35	0.34	0.35	0.32
Refrigeration	0.41	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Cooking	0.13	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Clothes Dryers	0.19	0.21	0.21	0.21	0.20	0.20	0.20	0.19
Freezers	0.13	0.09	0.09	0.09	0.09	0.09	0.09	0.08
Lighting	0.32	0.37	0.37	0.36	0.35	0.34	0.34	0.31
Clothes Washers ¹	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Dishwashers ¹	0.05	0.05	0.05	0.04	0.05	0.04	0.05	0.04
Color Televisions	0.21	0.29	0.29	0.29	0.28	0.27	0.27	0.26
Personal Computers	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Furnace Fans	0.09	0.11	0.11	0.11	0.10	0.10	0.10	0.09
Other Uses ²	0.79	1.35	1.34	1.31	1.27	1.25	1.25	1.17
Delivered Energy	3.68	4.34	4.32	4.21	4.13	4.00	4.07	3.78
Natural Gas								
Space Heating	3.77	3.86	3.85	3.76	3.65	3.50	3.58	3.19
Space Cooling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Heating	1.31	1.35	1.35	1.32	1.28	1.24	1.26	1.15
Cooking	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Clothes Dryers	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Other Uses ³	0.09	0.10	0.10	0.10	0.09	0.09	0.09	0.09
Delivered Energy	5.39	5.53	5.52	5.40	5.25	5.05	5.16	4.65
Distillate								
Space Heating	0.80	0.68	0.68	0.66	0.65	0.62	0.64	0.57
Water Heating	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08
Other Uses ⁴	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivered Energy	0.89	0.77	0.77	0.75	0.74	0.71	0.73	0.65
Liquefied Petroleum Gas								
Space Heating	0.32	0.32	0.31	0.32	0.31	0.31	0.30	0.30
Water Heating	0.07	0.08	0.08	0.08	0.07	0.08	0.07	0.07
Cooking	0.03	0.03	0.03	0.04	0.03	0.04	0.03	0.04
Other Uses ³	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Delivered Energy	0.42	0.44	0.43	0.45	0.43	0.43	0.42	0.41
Marketed Renewables (wood) ⁵	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.62
Other Fuels ⁶	0.13	0.13	0.13	0.12	0.11	0.11	0.11	0.10

Table A4. Residential Sector Key Indicators and End-Use Consumption (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Projections							Projections						
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
81.55	81.48	81.53	81.34	81.52	81.08	81.41	89.52	89.50	89.63	89.50	89.52	89.61	89.81
27.92	27.85	27.83	27.68	27.81	27.42	27.65	30.84	30.76	30.84	30.71	30.71	30.70	30.85
7.58	7.57	7.60	7.56	7.60	7.54	7.61	8.35	8.37	8.38	8.40	8.38	8.47	8.44
117.04	116.90	116.96	116.58	116.92	116.04	116.67	128.71	128.62	128.84	128.60	128.61	128.78	129.10
1707	1707	1707	1707	1707	1708	1708	1732	1732	1732	1732	1732	1732	1732
104.60	100.24	100.46	94.35	94.51	87.44	87.80	102.07	94.99	95.01	91.07	91.36	85.69	86.96
79.49	72.59	72.56	62.35	61.90	57.88	57.32	76.23	63.67	63.75	56.62	56.73	56.32	57.21
184.09	172.83	173.01	156.70	156.42	145.32	145.12	178.30	158.66	158.76	147.68	148.08	142.01	144.17
0.48	0.46	0.45	0.42	0.42	0.39	0.39	0.51	0.47	0.46	0.45	0.44	0.43	0.43
0.53	0.50	0.50	0.46	0.45	0.42	0.41	0.57	0.52	0.51	0.49	0.49	0.46	0.46
0.38	0.36	0.36	0.34	0.34	0.31	0.31	0.41	0.38	0.38	0.37	0.37	0.34	0.35
0.29	0.28	0.28	0.28	0.28	0.28	0.28	0.27	0.27	0.27	0.27	0.27	0.27	0.27
0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.17	0.17	0.17	0.17	0.17	0.17	0.17
0.23	0.22	0.22	0.20	0.21	0.19	0.20	0.26	0.24	0.24	0.23	0.24	0.23	0.23
0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07
0.40	0.38	0.38	0.35	0.36	0.31	0.33	0.45	0.42	0.42	0.41	0.41	0.39	0.39
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.30	0.29	0.29	0.27	0.28	0.26	0.26	0.33	0.31	0.31	0.31	0.31	0.30	0.30
0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.06	0.06	0.06	0.05	0.05	0.05	0.05
0.12	0.11	0.12	0.11	0.11	0.10	0.10	0.14	0.13	0.13	0.13	0.13	0.12	0.13
1.55	1.48	1.49	1.41	1.42	1.32	1.35	1.96	1.84	1.84	1.79	1.80	1.73	1.76
4.62	4.42	4.43	4.19	4.21	3.93	3.97	5.30	4.97	4.95	4.82	4.83	4.65	4.69
3.97	3.76	3.78	3.44	3.45	3.05	3.07	4.13	3.74	3.75	3.47	3.49	3.15	3.23
0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
1.40	1.34	1.34	1.24	1.24	1.14	1.14	1.48	1.35	1.35	1.27	1.27	1.18	1.20
0.18	0.18	0.18	0.18	0.18	0.17	0.18	0.19	0.19	0.19	0.19	0.19	0.19	0.19
0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.05	0.05
0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.11	0.11	0.11	0.10	0.10	0.10	0.10
5.71	5.43	5.45	5.00	5.02	4.51	4.53	5.98	5.45	5.47	5.10	5.11	4.68	4.79
0.64	0.61	0.61	0.57	0.57	0.51	0.51	0.57	0.53	0.52	0.51	0.51	0.45	0.46
0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.09	0.08	0.09	0.08	0.08	0.08	0.08
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.73	0.70	0.69	0.65	0.65	0.59	0.59	0.66	0.61	0.61	0.59	0.59	0.53	0.54
0.32	0.31	0.33	0.31	0.32	0.29	0.30	0.33	0.32	0.33	0.32	0.33	0.29	0.31
0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.08	0.09
0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.45	0.44	0.46	0.43	0.45	0.41	0.42	0.47	0.46	0.48	0.46	0.48	0.42	0.44
0.61	0.61	0.61	0.62	0.62	0.63	0.64	0.62	0.63	0.63	0.64	0.64	0.67	0.68
0.12	0.11	0.11	0.10	0.10	0.09	0.09	0.12	0.10	0.10	0.10	0.10	0.09	0.09

Table A4. Residential Sector Key Indicators and End-Use Consumption (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Delivered Energy Consumption by End-Use								
Space Heating	6.10	6.06	6.05	5.92	5.78	5.57	5.69	5.16
Space Cooling	0.47	0.51	0.51	0.48	0.48	0.45	0.47	0.41
Water Heating	1.84	1.89	1.89	1.84	1.80	1.74	1.77	1.62
Refrigeration	0.41	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Cooking	0.33	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Clothes Dryers	0.24	0.27	0.27	0.26	0.25	0.25	0.25	0.23
Freezers	0.13	0.09	0.09	0.09	0.09	0.09	0.09	0.08
Lighting	0.32	0.37	0.37	0.36	0.35	0.34	0.34	0.31
Clothes Washers	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Dishwashers	0.05	0.05	0.05	0.04	0.05	0.04	0.05	0.04
Color Televisions	0.21	0.29	0.29	0.29	0.28	0.27	0.27	0.26
Personal Computers	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Furnace Fans	0.09	0.11	0.11	0.11	0.10	0.10	0.10	0.09
Other Uses ⁷	0.90	1.45	1.45	1.42	1.38	1.35	1.36	1.27
Delivered Energy	11.13	11.81	11.77	11.53	11.26	10.91	11.10	10.20
Electricity Related Losses	8.21	9.12	8.98	8.69	8.33	7.84	8.15	7.08
Total Energy Consumption by End-Use								
Space Heating	7.15	7.07	7.03	6.85	6.69	6.39	6.58	5.89
Space Cooling	1.50	1.58	1.56	1.48	1.44	1.32	1.41	1.17
Water Heating	2.66	2.68	2.66	2.59	2.51	2.40	2.47	2.21
Refrigeration	1.32	0.98	0.97	0.96	0.95	0.93	0.94	0.90
Cooking	0.62	0.65	0.64	0.64	0.63	0.62	0.63	0.61
Clothes Dryers	0.68	0.71	0.71	0.69	0.66	0.63	0.65	0.58
Freezers	0.42	0.26	0.26	0.26	0.26	0.25	0.26	0.24
Lighting	1.05	1.15	1.13	1.10	1.05	1.01	1.03	0.90
Clothes Washers	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08
Dishwashers	0.15	0.14	0.14	0.14	0.14	0.13	0.14	0.13
Color Televisions	0.68	0.91	0.90	0.88	0.84	0.80	0.82	0.74
Personal Computers	0.05	0.10	0.10	0.09	0.09	0.09	0.09	0.08
Furnace Fans	0.29	0.33	0.33	0.32	0.30	0.30	0.30	0.27
Other Uses ⁷	2.67	4.28	4.23	4.13	3.95	3.79	3.86	3.47
Total	19.34	20.92	20.75	20.22	19.59	18.75	19.25	17.28
Non-Marketed Renewables								
Geothermal ⁸	0.01	0.01	0.01	0.02	0.01	0.02	0.01	0.02
Solar ⁹	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Total	0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.03

Table A4. Residential Sector Key Indicators and End-Use Consumption (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Projections							Projections						
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
6.14	5.86	5.88	5.45	5.47	4.96	4.99	6.28	5.78	5.80	5.49	5.51	5.08	5.19
0.54	0.50	0.50	0.46	0.46	0.42	0.42	0.58	0.53	0.52	0.50	0.50	0.47	0.47
1.96	1.87	1.87	1.75	1.75	1.61	1.61	2.06	1.90	1.91	1.81	1.81	1.68	1.71
0.29	0.28	0.28	0.28	0.28	0.28	0.28	0.27	0.27	0.27	0.27	0.27	0.27	0.27
0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.40	0.40	0.40	0.40	0.40	0.40	0.40
0.28	0.27	0.27	0.26	0.26	0.24	0.24	0.32	0.30	0.30	0.29	0.29	0.28	0.28
0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07
0.40	0.38	0.38	0.35	0.36	0.31	0.33	0.45	0.42	0.42	0.41	0.41	0.39	0.39
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.30	0.29	0.29	0.27	0.28	0.26	0.26	0.33	0.31	0.31	0.31	0.31	0.30	0.30
0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.06	0.06	0.06	0.05	0.05	0.05	0.05
0.12	0.11	0.12	0.11	0.11	0.10	0.10	0.14	0.13	0.13	0.13	0.13	0.12	0.13
1.67	1.59	1.60	1.51	1.53	1.42	1.45	2.09	1.96	1.96	1.91	1.91	1.84	1.87
12.24	11.72	11.75	11.00	11.05	10.15	10.24	13.14	12.22	12.24	11.71	11.75	11.04	11.23
9.30	8.49	8.49	7.27	7.24	6.72	6.69	9.81	8.19	8.21	7.28	7.30	7.25	7.39
7.11	6.74	6.73	6.18	6.18	5.63	5.64	7.23	6.55	6.56	6.17	6.18	5.75	5.86
1.60	1.46	1.45	1.26	1.24	1.14	1.11	1.63	1.38	1.37	1.24	1.23	1.18	1.19
2.72	2.56	2.56	2.34	2.33	2.14	2.13	2.82	2.53	2.53	2.36	2.36	2.22	2.26
0.86	0.83	0.83	0.78	0.77	0.77	0.76	0.78	0.72	0.73	0.68	0.68	0.69	0.70
0.67	0.65	0.65	0.62	0.62	0.62	0.62	0.71	0.68	0.68	0.65	0.65	0.66	0.67
0.74	0.68	0.69	0.61	0.61	0.57	0.57	0.80	0.70	0.70	0.64	0.65	0.63	0.65
0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.21	0.19	0.19	0.18	0.18	0.18	0.18
1.20	1.10	1.11	0.97	0.98	0.85	0.88	1.28	1.11	1.12	1.02	1.02	0.99	1.02
0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.08	0.08	0.08	0.08
0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.15	0.14	0.14	0.14	0.14	0.14	0.14
0.91	0.84	0.85	0.75	0.75	0.70	0.71	0.96	0.83	0.84	0.77	0.77	0.76	0.77
0.12	0.12	0.12	0.10	0.10	0.10	0.10	0.17	0.15	0.15	0.14	0.14	0.13	0.14
0.36	0.33	0.34	0.29	0.30	0.27	0.28	0.40	0.35	0.35	0.32	0.33	0.31	0.32
4.79	4.44	4.46	3.95	3.97	3.69	3.72	5.72	4.99	5.01	4.61	4.63	4.55	4.63
21.55	20.20	20.23	18.27	18.29	16.86	16.93	22.95	20.41	20.45	18.99	19.04	18.29	18.61
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.04	0.04	0.04	0.04	0.05	0.05
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.05	0.05	0.05	0.05	0.05	0.06	0.06

¹Does not include water heating 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 1993*.

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.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding.

Sources: 1996: Energy Information Administration (EIA) *Short-Term Energy Outlook, August 1997*. Online. <http://www.eia.doe.gov/emeu/steo/pub/upd/aug97/index.html> (August 21, 1997). Projections: EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A5. Commercial Sector Key Indicators and End-Use Consumption
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Key Indicators								
Total Floor Space (billion square feet)								
Surviving	69.2	77.3	77.3	77.3	77.3	77.2	77.3	77.1
New Additions	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Total	70.9	79.0	79.0	79.0	79.0	78.9	79.0	78.7
Energy Consumption Intensity (thousand Btu per square foot)								
Delivered Energy Consumption	105.3	104.8	104.5	102.4	99.0	95.3	96.9	85.1
Electricity Related Losses	106.0	104.2	102.6	99.7	94.5	88.4	92.0	77.2
Total Energy Consumption	211.2	209.0	207.2	202.0	193.5	183.8	188.9	162.3
Delivered Energy Consumption by Fuel								
Electricity								
Space Heating	0.12	0.11	0.11	0.11	0.10	0.10	0.10	0.09
Space Cooling	0.51	0.54	0.54	0.52	0.51	0.49	0.50	0.44
Water Heating	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.14
Ventilation	0.17	0.18	0.18	0.18	0.17	0.16	0.17	0.15
Cooking	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
Lighting	1.16	1.25	1.24	1.21	1.17	1.11	1.15	0.99
Refrigeration	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Office Equipment (PC)	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.07
Office Equipment (non-PC)	0.20	0.25	0.25	0.24	0.24	0.23	0.23	0.21
Other Uses ¹	0.80	1.15	1.14	1.12	1.09	1.06	1.07	0.97
Delivered Energy	3.37	3.91	3.90	3.81	3.70	3.56	3.63	3.24
Natural Gas²								
Space Heating	1.34	1.38	1.37	1.34	1.29	1.23	1.26	1.06
Space Cooling	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.02
Water Heating	0.46	0.50	0.49	0.48	0.47	0.44	0.45	0.38
Cooking	0.18	0.21	0.21	0.21	0.20	0.19	0.19	0.16
Other Uses ³	1.29	1.52	1.52	1.49	1.44	1.38	1.40	1.21
Delivered Energy	3.30	3.63	3.62	3.55	3.42	3.27	3.34	2.83
Distillate								
Space Heating	0.20	0.17	0.17	0.17	0.16	0.15	0.15	0.13
Water Heating	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04
Other Uses ⁴	0.19	0.17	0.17	0.17	0.16	0.15	0.16	0.13
Delivered Energy	0.44	0.39	0.39	0.38	0.36	0.35	0.35	0.30
Other Fuels⁵	0.36	0.34	0.34	0.34	0.33	0.33	0.33	0.32
Marketed Renewable Fuels								
Biomass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivered Energy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivered Energy Consumption by End-Use								
Space Heating	1.65	1.65	1.65	1.62	1.55	1.48	1.52	1.28
Space Cooling	0.53	0.57	0.57	0.55	0.54	0.51	0.53	0.47
Water Heating	0.68	0.72	0.72	0.70	0.68	0.64	0.66	0.56
Ventilation	0.17	0.18	0.18	0.18	0.17	0.16	0.17	0.15
Cooking	0.21	0.24	0.24	0.24	0.23	0.21	0.22	0.18
Lighting	1.16	1.25	1.24	1.21	1.17	1.11	1.15	0.99
Refrigeration	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Office Equipment (PC)	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.07
Office Equipment (non-PC)	0.20	0.25	0.25	0.24	0.24	0.23	0.23	0.21
Other Uses ⁶	2.64	3.18	3.18	3.12	3.02	2.93	2.96	2.64
Delivered Energy	7.47	8.28	8.26	8.09	7.82	7.52	7.66	6.70

Table A5. Commercial Sector Key Indicators and End-Use Consumption (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
81.1	81.1	81.1	80.9	80.9	80.7	80.7	85.7	85.5	85.5	85.5	85.4	85.3	85.3
1.7	1.7	1.7	1.7	1.7	1.6	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.8	82.7	82.8	82.6	82.7	82.3	82.5	86.8	86.7	86.7	86.6	86.6	86.4	86.4
105.0	99.8	100.2	91.6	92.2	79.2	80.9	105.8	97.0	97.2	91.7	92.2	83.1	85.8
101.3	91.8	92.2	77.2	77.2	68.6	68.7	96.7	79.6	80.2	70.0	70.4	68.0	70.0
206.2	191.6	192.4	168.9	169.4	147.8	149.6	202.4	176.7	177.3	161.7	162.6	151.1	155.9
0.11	0.10	0.10	0.09	0.09	0.08	0.09	0.10	0.09	0.09	0.09	0.09	0.08	0.08
0.54	0.51	0.51	0.48	0.48	0.43	0.44	0.54	0.50	0.50	0.48	0.48	0.45	0.46
0.17	0.16	0.16	0.15	0.15	0.13	0.14	0.16	0.15	0.15	0.14	0.14	0.13	0.13
0.19	0.18	0.18	0.16	0.16	0.15	0.15	0.19	0.17	0.17	0.16	0.17	0.15	0.15
0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02
1.28	1.20	1.20	1.08	1.10	0.94	0.96	1.31	1.16	1.16	1.09	1.10	0.98	1.02
0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.16	0.16	0.16	0.16	0.16	0.16
0.09	0.09	0.09	0.08	0.08	0.07	0.07	0.11	0.10	0.10	0.10	0.10	0.09	0.09
0.28	0.27	0.27	0.25	0.26	0.23	0.24	0.34	0.32	0.32	0.31	0.32	0.30	0.31
1.33	1.27	1.28	1.19	1.21	1.08	1.11	1.59	1.50	1.50	1.45	1.46	1.39	1.41
4.17	3.96	3.98	3.68	3.71	3.30	3.37	4.53	4.19	4.19	4.02	4.03	3.77	3.84
1.42	1.34	1.35	1.20	1.20	0.97	0.99	1.43	1.29	1.29	1.18	1.19	1.02	1.07
0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.04	0.03	0.03	0.03	0.03	0.03	0.03
0.52	0.49	0.49	0.44	0.44	0.35	0.36	0.56	0.50	0.50	0.45	0.46	0.39	0.41
0.22	0.21	0.21	0.19	0.19	0.15	0.15	0.24	0.21	0.21	0.19	0.19	0.16	0.17
1.60	1.52	1.52	1.38	1.39	1.15	1.18	1.66	1.52	1.52	1.41	1.42	1.24	1.30
3.79	3.59	3.61	3.22	3.24	2.65	2.71	3.93	3.55	3.56	3.27	3.29	2.84	2.97
0.16	0.15	0.15	0.14	0.14	0.11	0.12	0.14	0.13	0.13	0.12	0.12	0.10	0.11
0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.03	0.03
0.17	0.16	0.17	0.15	0.15	0.12	0.13	0.18	0.16	0.16	0.16	0.16	0.13	0.14
0.38	0.36	0.36	0.33	0.33	0.26	0.28	0.36	0.33	0.33	0.31	0.32	0.26	0.28
0.35	0.34	0.34	0.33	0.33	0.31	0.31	0.36	0.34	0.34	0.34	0.34	0.31	0.32
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.68	1.59	1.60	1.43	1.44	1.17	1.20	1.67	1.51	1.51	1.39	1.40	1.20	1.26
0.58	0.55	0.55	0.51	0.51	0.45	0.46	0.58	0.54	0.53	0.51	0.51	0.48	0.49
0.74	0.70	0.70	0.63	0.63	0.52	0.53	0.76	0.69	0.69	0.63	0.64	0.55	0.58
0.19	0.18	0.18	0.16	0.16	0.15	0.15	0.19	0.17	0.17	0.16	0.17	0.15	0.15
0.25	0.24	0.24	0.21	0.21	0.17	0.17	0.26	0.23	0.23	0.21	0.21	0.18	0.19
1.28	1.20	1.20	1.08	1.10	0.94	0.96	1.31	1.16	1.16	1.09	1.10	0.98	1.02
0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.16	0.16	0.16	0.16	0.16	0.16
0.09	0.09	0.09	0.08	0.08	0.07	0.07	0.11	0.10	0.10	0.10	0.10	0.09	0.09
0.28	0.27	0.27	0.25	0.26	0.23	0.24	0.34	0.32	0.32	0.31	0.32	0.30	0.31
3.45	3.30	3.32	3.05	3.08	2.66	2.73	3.79	3.52	3.53	3.36	3.38	3.07	3.17
8.69	8.26	8.30	7.56	7.62	6.52	6.67	9.18	8.41	8.42	7.94	7.98	7.18	7.42

Table A5. Commercial Sector Key Indicators and End-Use Consumption (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Electricity Related Losses	7.52	8.23	8.11	7.87	7.46	6.97	7.27	6.08
Total Energy Consumption by End-Use								
Space Heating	1.91	1.88	1.87	1.83	1.76	1.68	1.72	1.45
Space Cooling	1.67	1.70	1.68	1.62	1.56	1.46	1.52	1.29
Water Heating	1.07	1.08	1.08	1.05	1.01	0.95	0.98	0.83
Ventilation	0.55	0.57	0.56	0.54	0.52	0.49	0.50	0.43
Cooking	0.28	0.30	0.30	0.29	0.28	0.27	0.28	0.23
Lighting	3.76	3.88	3.83	3.71	3.53	3.29	3.44	2.85
Refrigeration	0.45	0.47	0.47	0.47	0.46	0.45	0.46	0.43
Office Equipment (PC)	0.22	0.25	0.25	0.25	0.23	0.22	0.23	0.20
Office Equipment (non-PC)	0.63	0.78	0.77	0.75	0.71	0.68	0.70	0.60
Other Uses ⁶	4.43	5.59	5.56	5.44	5.22	5.00	5.10	4.46
Total	14.98	16.51	16.37	15.96	15.29	14.49	14.93	12.77
Non-Marketed Renewable Fuels								
Solar ⁷	0.01	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Total	0.01	0.03	0.03	0.03	0.03	0.03	0.03	0.03

Table A5. Commercial Sector Key Indicators and End-Use Consumption (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
8.39	7.60	7.63	6.38	6.38	5.64	5.67	8.39	6.90	6.95	6.06	6.10	5.88	6.05
1.89	1.78	1.79	1.59	1.60	1.31	1.34	1.85	1.66	1.66	1.52	1.53	1.33	1.39
1.66	1.53	1.53	1.34	1.33	1.19	1.20	1.58	1.36	1.36	1.24	1.24	1.19	1.22
1.08	1.01	1.01	0.89	0.89	0.75	0.76	1.06	0.93	0.93	0.85	0.85	0.76	0.79
0.56	0.52	0.52	0.45	0.44	0.39	0.39	0.54	0.46	0.46	0.41	0.41	0.39	0.40
0.31	0.29	0.29	0.25	0.25	0.21	0.21	0.31	0.27	0.27	0.24	0.25	0.21	0.22
3.85	3.49	3.51	2.96	2.98	2.54	2.58	3.73	3.08	3.10	2.74	2.76	2.52	2.62
0.48	0.46	0.46	0.43	0.43	0.42	0.42	0.47	0.44	0.44	0.41	0.41	0.42	0.42
0.27	0.25	0.25	0.22	0.22	0.20	0.20	0.30	0.26	0.26	0.24	0.24	0.24	0.24
0.85	0.79	0.79	0.69	0.70	0.62	0.63	0.98	0.86	0.86	0.79	0.79	0.77	0.79
6.12	5.73	5.77	5.12	5.16	4.52	4.61	6.74	5.99	6.02	5.56	5.59	5.24	5.39
17.08	15.86	15.93	13.94	14.00	12.16	12.34	17.57	15.31	15.37	14.00	14.08	13.06	13.47
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04

¹Includes miscellaneous uses, such as service station equipment, district services, automated teller machines, telecommunications equipment, and medical equipment.

²Excludes estimated consumption from independent power producers.

³Includes miscellaneous uses, such as district services, pumps, lighting, emergency electric generators, and manufacturing performed in commercial buildings.

⁴Includes miscellaneous uses, such as cooking, district services, and emergency electric generators.

⁵Includes residual fuel oil, liquefied petroleum gas, coal, motor gasoline, and kerosene.

⁶Includes miscellaneous uses, such as service station equipment, district services, automated teller machines, telecommunications equipment, medical equipment, pumps, lighting, emergency electric generators, manufacturing performed in commercial buildings, and cooking (distillate), plus residual fuel oil, liquefied petroleum gas, coal, motor gasoline, and kerosene.

⁷Includes primary energy displaced by solar thermal water heaters.

Btu = British thermal unit.

PC = Personal computer.

Note: Totals may not equal sum of components due to independent rounding. Consumption values of 0.000 are values that round to 0.00, because they are less than 0.005.

Sources: 1996 Energy Information Administration, *Short-Term Energy Outlook, August 1997*, Online. <http://www.eia.doe.gov/emeu/steo/pub/upd/aug97/index.html> (August 21, 1997).

Projections: EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A6. Industrial Sector Key Indicators and Consumption
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Key Indicators								
Value of Gross Output (billion 1987 dollars)								
Manufacturing	3030	3798	3797	3733	3756	3700	3736	3641
Nonmanufacturing	774	896	895	881	883	871	877	856
Total	3805	4694	4692	4614	4639	4571	4613	4496
Energy Prices (1996 dollars per million Btu)								
Electricity	13.37	11.57	11.83	12.92	14.61	16.15	15.56	20.39
Natural Gas	2.96	2.80	2.88	3.22	3.93	4.64	4.36	6.89
Steam Coal	1.46	1.30	1.42	2.10	3.27	4.38	3.96	7.84
Residual Oil	2.99	2.75	2.84	3.32	4.34	5.18	4.90	7.95
Distillate Oil	5.50	5.43	5.53	5.93	6.87	7.62	7.38	10.11
Liquefied Petroleum Gas	7.80	6.70	6.83	7.06	7.80	8.36	8.24	10.18
Motor Gasoline	9.86	8.77	8.94	9.27	10.21	10.88	10.71	13.05
Metallurgical Coal	1.77	1.63	1.76	2.43	3.60	4.70	4.28	8.16
Energy Consumption								
Consumption¹								
Purchased Electricity	3.46	4.05	4.03	3.93	3.92	3.75	3.85	3.58
Natural Gas ²	9.96	10.97	10.97	10.76	11.11	10.96	11.14	11.03
Steam Coal	1.55	1.69	1.67	1.51	1.24	1.07	1.15	0.86
Metallurgical Coal and Coke ³	0.85	0.92	0.92	0.90	0.89	0.86	0.88	0.83
Residual Fuel	0.34	0.35	0.35	0.34	0.34	0.33	0.34	0.31
Distillate	1.17	1.33	1.33	1.31	1.33	1.31	1.33	1.33
Liquefied Petroleum Gas	2.12	2.28	2.28	2.23	2.25	2.22	2.24	2.22
Petrochemical Feedstocks	1.28	1.39	1.39	1.35	1.36	1.34	1.35	1.31
Other Petroleum ⁴	4.31	4.78	4.77	4.72	4.67	4.54	4.58	4.30
Renewables ⁵	1.82	2.11	2.11	2.09	2.10	2.10	2.09	2.08
Delivered Energy	26.87	29.87	29.82	29.14	29.21	28.46	28.95	27.83
Electricity Related Losses	7.72	8.52	8.39	8.12	7.91	7.34	7.71	6.71
Total	34.59	38.39	38.22	37.26	37.12	35.80	36.66	34.54
Consumption per Unit of Output¹ (thousand Btu per 1987 dollars)								
Purchased Electricity	0.91	0.86	0.86	0.85	0.84	0.82	0.83	0.80
Natural Gas ²	2.62	2.34	2.34	2.33	2.39	2.40	2.41	2.45
Steam Coal	0.41	0.36	0.36	0.33	0.27	0.23	0.25	0.19
Metallurgical Coal and Coke ³	0.22	0.20	0.20	0.19	0.19	0.19	0.19	0.18
Residual Fuel	0.09	0.08	0.07	0.07	0.07	0.07	0.07	0.07
Distillate	0.31	0.28	0.28	0.28	0.29	0.29	0.29	0.30
Liquefied Petroleum Gas	0.56	0.49	0.49	0.48	0.49	0.48	0.49	0.49
Petrochemical Feedstocks	0.34	0.30	0.30	0.29	0.29	0.29	0.29	0.29
Other Petroleum ⁴	1.13	1.02	1.02	1.02	1.01	0.99	0.99	0.96
Renewables ⁵	0.48	0.45	0.45	0.45	0.45	0.46	0.45	0.46
Delivered Energy	7.06	6.36	6.36	6.31	6.30	6.23	6.27	6.19
Electricity Related Losses	2.03	1.82	1.79	1.76	1.71	1.61	1.67	1.49
Total	9.09	8.18	8.15	8.07	8.00	7.83	7.95	7.68

Table A6. Industrial Sector Key Indicators and Consumption (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
4316	4262	4247	4188	4250	4026	4142	4954	4850	4788	4797	4818	4751	4616
967	952	961	937	955	906	940	1061	1044	1047	1035	1035	1036	1027
5283	5214	5208	5126	5205	4932	5083	6015	5894	5835	5832	5853	5786	5644
11.28	13.86	13.59	17.12	16.59	21.51	20.49	10.31	13.83	13.79	15.38	15.19	17.67	16.90
2.98	3.96	3.87	5.74	5.60	8.65	8.30	3.25	5.06	5.03	6.35	6.24	8.50	7.80
1.26	2.96	2.83	5.37	5.03	10.03	9.21	1.18	3.67	3.59	4.72	4.62	8.83	7.86
2.94	4.17	4.03	5.96	5.66	9.65	8.83	3.16	4.97	4.82	5.74	5.53	8.91	7.99
5.68	6.76	6.66	8.35	8.09	11.70	10.90	5.86	7.40	7.22	8.10	7.88	10.97	10.06
7.01	7.79	7.73	8.76	8.52	11.37	10.79	6.99	8.12	7.72	8.47	8.42	10.87	9.99
9.13	10.26	10.10	11.57	11.35	14.50	13.74	9.33	10.78	10.53	11.36	11.09	13.83	12.92
1.58	3.28	3.15	5.69	5.35	10.36	9.54	1.51	4.00	3.92	5.05	4.95	9.19	8.22
4.30	4.13	4.11	3.95	4.00	3.67	3.78	4.51	4.27	4.23	4.13	4.13	3.98	3.88
11.43	11.47	11.39	11.54	11.50	11.12	11.06	11.78	11.65	11.55	11.31	11.23	11.37	10.84
1.74	1.36	1.37	1.07	1.12	0.83	0.86	1.79	1.36	1.35	1.26	1.26	0.90	0.92
0.90	0.87	0.86	0.83	0.81	0.81	0.79	0.85	0.76	0.75	0.73	0.71	0.72	0.69
0.35	0.35	0.35	0.36	0.36	0.41	0.43	0.35	0.37	0.37	0.50	0.52	0.44	0.44
1.42	1.41	1.41	1.43	1.44	1.44	1.47	1.52	1.52	1.53	1.55	1.55	1.58	1.55
2.44	2.40	2.38	2.38	2.41	2.37	2.43	2.52	2.47	2.44	2.46	2.47	2.47	2.52
1.48	1.45	1.43	1.41	1.43	1.35	1.38	1.52	1.46	1.44	1.44	1.44	1.41	1.37
5.03	4.92	4.93	4.84	4.87	4.44	4.68	5.34	5.34	5.34	5.41	5.35	5.08	5.04
2.25	2.25	2.25	2.23	2.29	2.17	2.27	2.35	2.39	2.39	2.39	2.40	2.40	2.39
31.35	30.60	30.50	30.04	30.23	28.61	29.15	32.53	31.59	31.39	31.19	31.06	30.34	29.63
8.65	7.92	7.88	6.85	6.87	6.28	6.37	8.37	7.05	7.01	6.23	6.24	6.20	6.10
40.00	38.52	38.38	36.89	37.11	34.88	35.52	40.89	38.64	38.40	37.42	37.30	36.55	35.74
0.81	0.79	0.79	0.77	0.77	0.74	0.74	0.75	0.73	0.72	0.71	0.71	0.69	0.69
2.16	2.20	2.19	2.25	2.21	2.26	2.18	1.96	1.98	1.98	1.94	1.92	1.97	1.92
0.33	0.26	0.26	0.21	0.21	0.17	0.17	0.30	0.23	0.23	0.22	0.22	0.16	0.16
0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.14	0.13	0.13	0.13	0.12	0.12	0.12
0.07	0.07	0.07	0.07	0.07	0.08	0.09	0.06	0.06	0.06	0.09	0.09	0.08	0.08
0.27	0.27	0.27	0.28	0.28	0.29	0.29	0.25	0.26	0.26	0.27	0.26	0.27	0.27
0.46	0.46	0.46	0.46	0.46	0.48	0.48	0.42	0.42	0.42	0.42	0.42	0.43	0.45
0.28	0.28	0.28	0.27	0.27	0.27	0.27	0.25	0.25	0.25	0.25	0.25	0.24	0.24
0.95	0.94	0.95	0.94	0.94	0.90	0.92	0.89	0.91	0.92	0.93	0.91	0.88	0.89
0.43	0.43	0.43	0.44	0.44	0.44	0.45	0.39	0.41	0.41	0.41	0.41	0.41	0.42
5.93	5.87	5.86	5.86	5.81	5.80	5.73	5.41	5.36	5.38	5.35	5.31	5.24	5.25
1.64	1.52	1.51	1.34	1.32	1.27	1.25	1.39	1.20	1.20	1.07	1.07	1.07	1.08
7.57	7.39	7.37	7.20	7.13	7.07	6.99	6.80	6.56	6.58	6.42	6.37	6.32	6.33

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.

Sources: 1996 prices for gasoline and distillate are based on prices in various issues of Energy Information Administration (EIA), *Petroleum Marketing Monthly*, DOE/EIA-0380(96/03-97/04) (Washington, DC, 1996 - 97). 1996 coal prices: EIA, *Monthly Energy Review*, DOE/EIA-0035(97/08) (Washington, DC, August 1997). 1996 electricity prices: EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A. Other 1996 prices derived from EIA, *State Energy Data Report 1994*. Online. <ftp://ftp.eia.doe.gov/pub/state.data/021494.pdf> (August 26, 1997). Other 1996 values: EIA, *Short-Term Energy Outlook, August 1997*. Online. <http://www.eia.doe.gov/emeu/steo/pub/upd/aug97/index.html> (August 21, 1997). Projections: EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A7. Transportation Sector Key Indicators and Delivered Energy Consumption

Key Indicators and Consumption	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Key Indicators								
Level of Travel (billions)								
Light-Duty Vehicles <8,500 lbs. (VMT)	2276	2668	2665	2656	2639	2586	2622	2453
Commercial Light Trucks (VMT) ¹	67	80	80	79	79	78	78	75
Freight Trucks >10,000 lbs. (VMT)	162	212	212	209	210	208	208	205
Air (seat miles available)	999	1472	1471	1450	1453	1402	1431	1281
Rail (ton miles traveled)	1218	1529	1499	1450	1379	1291	1311	1108
Marine (ton miles traveled)	779	862	859	841	841	821	831	796
Energy Efficiency Indicators								
New Car (miles per gallon) ²	28.2	29.8	29.9	30.5	30.7	32.1	31.0	33.8
New Light Truck (miles per gallon) ²	20.9	20.0	20.1	20.5	20.6	21.4	20.8	22.4
Light-Duty Fleet (miles per gallon) ³	20.2	20.3	20.3	20.4	20.3	20.7	20.3	21.0
New Commercial Light Truck (MPG) ¹	20.2	19.3	19.4	19.8	19.9	20.7	20.1	21.8
Stock Commercial Light Truck (MPG) ¹	14.5	14.8	14.8	14.9	14.9	15.1	14.9	15.2
Aircraft Efficiency (seat miles per gallon)	50.6	53.9	53.9	53.8	53.9	53.8	53.8	53.6
Freight Truck Efficiency (miles per gallon)	5.6	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Rail Efficiency (ton miles per thousand Btu)	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Domestic Shipping Efficiency (ton miles per thousand Btu)	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Energy Use by Mode (quadrillion Btu)								
Light-Duty Vehicles	13.95	16.51	16.49	16.31	16.29	15.64	16.16	14.59
Commercial Light Trucks ¹	0.58	0.67	0.67	0.66	0.66	0.64	0.66	0.62
Freight Trucks	4.04	4.93	4.93	4.86	4.89	4.81	4.88	4.74
Air	3.32	4.40	4.40	4.35	4.35	4.22	4.30	3.92
Rail	0.53	0.63	0.62	0.60	0.58	0.54	0.55	0.48
Marine	1.43	1.70	1.70	1.69	1.70	1.68	1.69	1.67
Pipeline Fuel	0.73	0.80	0.83	0.81	0.82	0.83	0.83	0.89
Other ⁴	0.24	0.28	0.28	0.27	0.28	0.27	0.28	0.26
Total	24.73	29.81	29.81	29.45	29.45	28.55	29.22	27.06

Table A7. Transportation Sector Key Indicators and Delivered Energy Consumption (Continued)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
2895	2857	2877	2752	2789	2505	2597	3247	3191	3223	3147	3172	2960	3050
87	86	87	84	85	79	82	98	97	97	96	96	93	93
232	229	230	226	230	220	227	250	247	246	245	246	246	243
1753	1729	1738	1638	1685	1434	1530	2285	2232	2254	2197	2207	2060	2108
1644	1499	1506	1266	1285	1084	1105	1784	1457	1462	1242	1244	1113	1099
916	889	890	863	866	818	827	965	913	910	884	878	846	834
30.6	32.0	32.1	33.6	33.2	36.4	35.3	31.6	33.1	33.5	33.6	34.2	35.6	35.6
20.4	21.2	21.5	22.1	22.1	23.7	23.3	21.8	22.7	23.4	23.0	23.8	24.1	24.7
20.5	20.7	20.9	21.2	21.5	21.7	22.4	21.4	22.2	22.5	22.6	23.0	24.0	24.2
19.5	20.4	20.6	21.3	21.2	22.9	22.5	20.4	21.3	22.0	21.7	22.5	22.8	23.3
15.0	15.1	15.2	15.3	15.5	15.5	15.9	15.4	15.8	16.1	16.0	16.4	16.6	17.0
55.6	55.6	55.8	55.6	55.8	55.4	55.7	59.4	59.7	59.8	59.8	59.9	59.9	60.0
6.1	6.1	6.1	6.1	6.1	6.1	6.2	6.3	6.3	6.3	6.5	6.5	6.6	6.7
2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0
2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0
17.75	17.29	17.25	16.27	16.24	14.39	14.49	19.04	18.09	17.93	17.49	17.27	15.54	15.84
0.73	0.71	0.71	0.69	0.69	0.64	0.64	0.80	0.77	0.75	0.75	0.73	0.70	0.68
5.21	5.15	5.17	5.07	5.13	4.92	5.02	5.41	5.31	5.30	5.17	5.14	5.09	4.95
5.03	4.96	4.97	4.73	4.83	4.23	4.45	6.00	5.84	5.88	5.74	5.76	5.41	5.52
0.66	0.61	0.61	0.53	0.54	0.46	0.47	0.69	0.58	0.58	0.51	0.51	0.46	0.46
1.91	1.90	1.90	1.89	1.90	1.86	1.89	2.25	2.24	2.25	2.23	2.23	2.23	2.23
0.87	0.90	0.89	0.96	0.99	0.95	0.95	0.98	1.05	1.05	1.10	1.10	1.05	1.05
0.30	0.30	0.30	0.29	0.30	0.27	0.29	0.32	0.32	0.33	0.32	0.32	0.33	0.33
32.35	31.70	31.70	30.30	30.49	27.60	28.07	35.37	34.08	33.96	33.19	32.95	30.69	30.95

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 lubricants and aviation gasoline.

Btu = British thermal unit.

VMT=Vehicle miles traveled.

MPG = Miles per gallon.

Lbs. = Pounds.

Note: Totals may not equal sum of components due to independent rounding.

Sources: 1996: Federal Aviation Administration (FAA), *FAA Aviation Forecasts Fiscal Years 1996-2007*, (Washington, DC, February 1995); Energy Information Administration (EIA), *Short-Term Energy Outlook, August 1997*, Online. <http://www.eia.doe.gov/emeu/steo/pub/upd/1aug97/index.html> (August 21, 1997); EIA, *Fuel Oil and Kerosene Sales 1996*, DOE/EIA-0535(96) (Washington, DC, September 1997); and United States Department of Defense, Defense Fuel Supply Center. **Projections:** EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A8. Electricity Supply, Disposition, and Prices
(Billion Kilowatthours, Unless Otherwise Noted)

Supply, Disposition, and Prices	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Generation by Fuel Type								
Electric Generators¹								
Coal	1758	2019	1949	1865	1681	1400	1504	765
Petroleum	80	42	41	38	36	32	35	38
Natural Gas	288	612	671	664	777	922	863	1274
Nuclear Power	675	651	683	683	683	689	698	698
Pumped Storage	-2	-3	-3	-3	-3	-3	-3	-3
Renewable Sources ²	392	369	379	378	385	385	401	424
Total	3191	3690	3720	3625	3559	3425	3498	3196
Non-Utility Generation for Own Use	6	6	6	6	6	5	6	6
Cogenerators³								
Coal	51	51	51	51	50	50	50	49
Petroleum	6	6	6	6	6	6	6	6
Natural Gas	196	214	214	215	222	221	224	228
Other Gaseous Fuels ⁴	7	7	7	7	7	7	7	7
Renewable Sources ²	42	47	47	46	46	46	46	46
Other ⁵	3	3	3	3	3	3	3	3
Total	305	329	329	329	335	334	337	340
Sales to Utilities	156	161	161	161	162	161	162	162
Generation for Own Use	149	168	168	168	174	173	175	178
Net Imports⁶	38	67	21	21	21	21	21	21
Electricity Sales by Sector								
Residential	1079	1271	1265	1233	1210	1174	1193	1107
Commercial	988	1147	1143	1117	1084	1044	1064	950
Industrial	1014	1188	1183	1152	1149	1099	1129	1049
Transportation	17	24	24	24	24	24	24	23
Total	3098	3630	3615	3527	3467	3341	3410	3129
End-Use Prices (1996 cents per kilowatthour)⁷								
Residential	8.3	7.4	7.5	8.0	9.1	9.9	9.6	12.4
Commercial	7.5	6.6	6.7	7.3	8.3	9.1	8.8	11.6
Industrial	4.6	3.9	4.0	4.4	5.0	5.5	5.3	7.0
Transportation	5.2	4.6	4.6	4.7	4.8	4.9	4.8	5.3
All Sectors Average	6.8	6.0	6.1	6.6	7.4	8.2	7.9	10.3

Table A8. Electricity Supply, Disposition, and Prices (Continued)
(Billion Kilowatthours, Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
2075	1709	1723	977	973	385	361	2186	1297	1319	508	522	27	28
36	30	30	25	23	40	38	29	19	21	64	113	40	51
868	1050	1040	1518	1548	1708	1743	1362	1858	1831	2243	2188	2138	2072
578	626	626	654	665	693	689	356	474	468	552	554	694	671
-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
373	389	388	409	408	466	535	383	437	425	571	566	857	943
3928	3801	3803	3581	3613	3288	3362	4312	4081	4061	3935	3941	3752	3762
6	5	6	5	5	5	5	6	5	5	5	5	5	5
51	50	50	50	50	49	49	51	50	50	49	49	49	49
6	6	6	6	6	6	6	6	6	6	7	9	7	7
222	227	223	233	228	240	233	217	222	221	228	222	234	228
7	7	7	7	7	7	7	7	7	7	7	7	7	7
50	50	50	49	51	48	50	51	53	53	53	53	53	53
3	3	3	3	3	3	3	3	3	3	3	3	3	3
339	343	340	349	345	353	349	336	341	341	348	344	353	347
163	163	163	164	163	165	164	162	163	163	164	163	165	164
177	180	178	185	182	189	186	174	178	178	184	180	188	183
64	10	10	10	10	10	10	59	4	4	4	4	4	4
1354	1296	1297	1228	1234	1150	1164	1552	1456	1451	1414	1414	1363	1375
1221	1161	1167	1078	1088	966	987	1328	1227	1227	1177	1182	1104	1127
1260	1210	1205	1157	1172	1075	1109	1323	1253	1238	1210	1209	1165	1137
30	30	30	29	29	27	28	37	36	36	36	36	34	34
3865	3696	3698	3492	3523	3219	3287	4240	3972	3953	3837	3842	3665	3673
7.3	8.7	8.6	10.7	10.3	13.3	12.6	6.9	9.0	9.0	10.0	9.8	11.4	10.9
6.4	7.9	7.7	9.8	9.5	12.4	11.8	6.0	8.1	8.0	8.9	8.8	10.3	9.8
3.8	4.7	4.6	5.8	5.7	7.3	7.0	3.5	4.7	4.7	5.2	5.2	6.0	5.8
4.5	4.7	4.7	5.0	4.9	5.4	5.2	4.2	4.4	4.4	4.5	4.4	4.5	4.5
5.9	7.1	7.0	8.8	8.5	11.0	10.4	5.6	7.3	7.3	8.1	8.0	9.3	8.9

¹Includes grid-connected generation at all utilities and nonutilities except for cogenerators. Includes small power producers, exempt wholesale generators, and generators at industrial and commercial facilities which provide electricity for on-site use and for sales to utilities.

²Includes conventional hydroelectric, geothermal, wood, wood waste, municipal solid waste, landfill gas, other biomass, solar, and wind power.

³Cogenerators produce electricity and other useful thermal energy. Includes sales to utilities and generation for own use.

⁴Other gaseous fuels include refinery and still gas.

⁵Other includes hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.

⁶In 1996 approximately two-thirds of the U.S. electricity imports were provided by renewable sources (hydroelectricity); EIA does not project future proportions.

⁷Prices represent average revenue per kilowatthour.

Kwh = kilowatthour.

Note: Totals may not equal sum of components due to independent rounding.

Sources: 1996 commercial and transportation sales derived from: Total transportation plus commercial sales come from Energy Information Administration (EIA), *State Energy Data Report 1994*. Online. <ftp://ftp.eia.doe.gov/pub/state.data/021494.pdf> (August 26, 1997), but individual sectors do not match because sales taken from commercial and placed in transportation, according to Oak Ridge National Laboratories, *Transportation Energy Data Book 16* (July 1996) which indicates the transportation value should be higher. 1996 generation by electric utilities, nonutilities, and cogenerators, net electricity imports, residential sales, and industrial sales: EIA, *Annual Energy Review 1996*, DOE/EIA-0384(96) (Washington, DC, July 1997). 1996 residential electricity prices derived from EIA, *Short Term Energy Outlook, August 1997*, Online. <http://www.eia.doe.gov/emeu/teo/pub/upd/aug97/index.html> (August 21, 1997). **1996 electricity prices for commercial, industrial, and transportation; price components; and projections:** EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

**Table A9. Electricity Generating Capability
(Thousand Megawatts)**

Net Summer Capability ¹	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Electric Generators²								
Capability								
Coal Steam	303.7	305.3	302.1	301.7	302.1	290.9	301.9	287.6
Other Fossil Steam ³	136.6	128.2	126.0	120.4	125.4	103.8	124.4	119.8
Combined Cycle	15.2	50.7	61.6	61.4	74.7	94.8	78.5	125.3
Combustion Turbine/Diesel	61.6	123.9	115.6	107.8	99.0	85.6	96.2	79.1
Nuclear Power	100.8	89.6	94.1	94.1	94.1	94.9	96.1	96.1
Pumped Storage	19.9	19.9	19.9	19.2	19.9	19.5	19.9	19.9
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Renewable Sources ⁴	87.8	91.1	91.3	91.3	93.1	93.7	97.0	106.6
Total	725.5	808.8	810.5	795.9	808.2	783.2	814.0	834.4
Cumulative Planned Additions⁵								
Coal Steam	2.1	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Other Fossil Steam ³	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Combined Cycle	2.0	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Combustion Turbine/Diesel	3.8	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Nuclear Power	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Pumped Storage	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Renewable Sources ⁴	0.7	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Total	11.1	16.3	16.3	16.3	16.3	16.3	16.3	16.3
Cumulative Unplanned Additions⁵								
Coal Steam	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
Other Fossil Steam ³	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Combined Cycle	0.0	34.2	45.1	44.9	58.2	78.3	62.0	108.7
Combustion Turbine/Diesel	5.7	68.4	59.6	51.5	43.3	29.9	40.4	23.2
Nuclear Power	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
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Renewable Sources ⁴	0.8	1.4	1.6	1.6	3.4	4.0	7.3	16.9
Total	6.6	107.1	106.2	98.0	104.9	112.2	109.7	148.8
Cumulative Total Additions	17.7	123.4	122.5	114.3	121.2	128.5	126.0	165.2
Cumulative Retirements⁶	15.2	40.1	37.5	43.9	38.5	70.9	37.5	56.3

Table A9. Electricity Generating Capability (Continued)
(Thousand Megawatts)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
307.8	299.9	296.3	275.8	254.6	258.9	164.5	313.6	270.5	274.6	197.5	205.9	77.8	83.7
123.1	104.2	104.1	92.7	81.5	108.0	110.7	109.3	73.7	79.1	49.7	46.1	71.1	69.6
90.1	117.1	120.5	186.7	199.5	191.3	217.1	182.9	244.3	237.8	318.0	323.0	321.4	318.9
152.1	121.8	118.4	100.1	87.2	97.9	84.7	186.6	137.4	136.7	109.3	96.5	116.9	112.5
76.0	83.2	83.2	88.8	89.2	95.4	94.1	47.9	62.9	62.1	73.8	74.6	93.4	90.2
19.5	19.2	19.2	19.5	19.5	19.9	19.9	19.2	19.2	19.2	19.5	19.5	19.5	19.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
91.8	93.7	93.4	100.1	100.9	114.9	137.8	93.6	107.7	104.4	140.3	140.2	191.0	211.7
860.5	839.2	835.2	863.7	832.5	886.2	828.8	953.1	915.7	913.8	908.2	906.0	891.1	906.5
2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
5.8	0.0	0.0	0.0	0.0	0.0	0.0	14.1	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73.4	100.3	103.8	169.9	182.7	174.5	200.4	166.2	227.8	221.2	301.5	306.5	305.1	302.6
97.9	67.3	63.4	45.6	32.2	43.4	29.1	132.4	83.2	82.5	55.2	41.8	62.7	58.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.2	4.1	3.8	10.5	11.3	25.2	48.2	4.5	18.5	15.2	51.1	51.1	101.8	122.6
179.2	171.8	171.0	226.0	226.2	243.1	277.7	317.1	329.5	319.0	407.8	399.4	469.6	483.2
195.8	188.4	187.7	242.7	242.9	259.8	294.3	333.8	346.1	335.6	424.5	416.0	486.3	499.9
60.9	73.7	76.9	104.5	135.4	99.1	191.1	106.3	155.0	146.3	241.8	235.1	320.2	318.4

Table A9. Electricity Generating Capability (Continued)
(Thousand Megawatts)

Net Summer Capability ¹	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Cogenerators⁷								
Capability								
Coal	9.2	9.9	9.9	9.9	9.9	9.8	9.8	9.8
Petroleum	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Natural Gas	31.4	34.9	35.0	35.0	36.0	35.9	36.2	36.8
Other Gaseous Fuels	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Renewable Sources ⁴	5.9	6.9	6.9	6.8	6.8	6.8	6.8	6.7
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	48.8	54.2	54.2	54.1	55.0	54.9	55.3	55.7
Cumulative Additions⁵	18.2	23.6	23.6	23.5	24.4	24.2	24.6	25.1

Table A9. Electricity Generating Capability (Continued)
(Thousand Megawatts)

Projections														
2010							2020							
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%		
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start	
	10.0	10.0	10.0	9.9	9.9	9.8	9.9	10.0	10.0	10.0	10.0	10.0	9.9	9.9
	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	36.0	36.6	36.2	37.5	36.9	38.4	37.6	35.4	36.1	36.0	37.0	36.5	37.8	37.0
	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	7.1	7.1	7.2	7.1	7.2	6.9	7.1	7.3	7.4	7.4	7.4	7.4	7.4	7.4
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	55.6	56.1	55.7	56.9	56.4	57.5	57.0	55.2	56.0	55.9	56.9	56.3	57.6	56.8
	24.9	25.5	25.1	26.3	25.8	26.9	26.4	24.6	25.4	25.3	26.2	25.7	27.0	26.2

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, exempt wholesale generators, and generators at industrial and commercial facilities which produce electricity for on-site use and sales to utilities.

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.

⁵Cumulative additions after December 31, 1995. Non-zero utility planned additions in 1995 indicate units operational in 1995 but not supplying power to the grid.

⁶Cumulative total retirements from 1990.

⁷Nameplate capacity is reported for nonutilities on Form EIA-867, "Annual Power Producer Report." Nameplate capacity is designated by the manufacturer. The nameplate capacity has been converted to the net summer capability based on historic relationships.

N/A = Not applicable.

Notes: Totals may not equal sum of components due to independent rounding. Net summer capability has been estimated for nonutility generators for AEO98. Net summer capacity is used to be consistent with electric utility capacity estimates. Data for electric utility capacity are the most recent data available as of August 25, 1997. Therefore, capacity estimates may differ from other Energy Information Administration sources.

Sources: 1996 net summer capability at electric utilities and planned additions: Energy Information Administration (EIA), Form EIA-860, "Annual Electric Generator Report." Net summer capability for nonutilities and cogeneration in 1996 and planned additions estimated based on EIA, Form EIA-867, "Annual Nonutility Power Producer Report." **Projections:** EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A10. Electricity Trade
(Billion Kilowatthours, Unless Otherwise Noted)

Electricity Trade	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Interregional Electricity Trade								
Gross Domestic Firm Power Sales	173.4	139.2	139.2	139.2	139.2	139.2	139.2	139.2
Gross Domestic Economy Sales	54.7	66.3	77.5	61.6	49.8	43.0	51.8	21.9
Gross Domestic Trade	228.1	205.5	216.7	200.9	189.0	182.2	191.0	161.1
International Electricity Trade								
Gross Domestic Firm Power Sales (million 1996 dollars)	8050.2	6462.9	6462.9	6462.9	6462.9	6462.9	6462.9	6462.9
Gross Domestic Economy Sales (million 1996 dollars)	1283.9	1551.5	1801.0	1766.7	1914.1	1992.3	2204.0	1629.4
Gross Domestic Sales (million 1996 dollars)	9334.1	8014.3	8263.9	8229.6	8377.0	8455.1	8666.9	8092.3
Firm Power Imports From Canada and Mexico ¹	26.1	51.4	5.6	5.6	5.6	5.6	5.6	5.6
Economy Imports From Canada and Mexico ¹	20.7	35.8	35.8	35.9	35.9	35.8	35.8	35.7
Gross Imports From Canada and Mexico¹	46.8	87.2	41.5	41.5	41.5	41.5	41.5	41.4
Firm Power Exports To Canada and Mexico	2.8	13.4	13.4	13.4	13.4	13.4	13.4	13.4
Economy Exports To Canada and Mexico	6.4	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Gross Exports To Canada and Mexico	9.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3

Table A10. Electricity Trade (Continued)
(Billion Kilowatthours, Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2
66.2	54.8	52.9	27.2	28.7	39.6	39.6	81.5	63.3	57.1	44.2	47.0	64.5	63.1
205.4	194.0	192.1	166.4	168.0	178.8	178.8	220.7	202.5	196.3	183.4	186.2	203.7	202.3
6462.9	6462.9	6462.9	6462.9	6462.9	6462.9	6462.9	6462.9	6462.9	6462.9	6462.9	6462.9	6462.9	6462.9
1567.0	1918.0	1807.1	1467.6	1434.5	3356.4	2753.0	1831.8	2478.3	2217.4	2013.1	2031.7	3901.1	3528.6
8029.9	8380.9	8270.0	7930.5	7897.4	9819.3	9215.8	8294.7	8941.2	8680.3	8475.9	8494.6	10364.0	9991.5
51.4	5.6	5.6	5.6	5.6	5.6	5.6	50.3	5.6	5.6	5.6	5.6	5.6	5.6
33.4	25.5	25.5	25.5	25.5	25.2	25.1	30.1	19.6	19.6	19.6	19.6	19.6	19.6
84.8	31.1	31.2	31.1	31.1	30.8	30.7	80.4	25.2	25.2	25.2	25.2	25.2	25.2
13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4
7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0

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

Note: Totals may not equal sum of components due to independent rounding. 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.

Sources: 1996 interregional electricity trade data: Energy Information Administration (EIA), Bulk Power Data System. 1996 international electricity trade data: DOE Form FE-718R, "Annual Report of International Electrical Export/Import Data." Firm/economy share: National Energy Board, *Annual Report 1993*. Planned interregional and international firm power sales: DOE Form IE-411, "Coordinated Bulk Power Supply Program Report," April 1995. Projections: EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A .

Table A11. Petroleum Supply and Disposition Balance
(Million Barrels per Day, Unless Otherwise Noted)

Supply and Disposition	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Crude Oil								
Domestic Crude Production ¹	6.48	6.02	6.01	5.97	6.00	5.95	6.00	5.90
Alaska	1.40	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Lower 48 States	5.08	5.09	5.07	5.04	5.07	5.01	5.07	4.97
Net Imports	7.40	9.81	9.80	9.80	9.72	9.45	9.63	9.14
Gross Imports	7.51	9.91	9.90	9.90	9.82	9.60	9.73	9.29
Exports	0.11	0.10	0.10	0.10	0.10	0.15	0.10	0.15
Other Crude Supply ²	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Crude Supply	13.87	15.83	15.81	15.77	15.73	15.40	15.63	15.04
Natural Gas Plant Liquids	1.83	1.95	1.97	1.93	2.00	2.03	2.01	2.16
Other Inputs ³	0.39	0.28	0.28	0.24	0.23	0.24	0.23	0.24
Refinery Processing Gain ⁴	0.84	0.86	0.84	0.84	0.81	0.81	0.82	0.75
Net Product Imports⁵	1.10	2.08	2.07	1.91	1.87	1.55	1.75	0.89
Gross Refined Prod. Imports	1.39	2.07	2.16	2.02	1.94	1.65	1.85	1.19
Unfinished Oil Imports	0.37	0.82	0.72	0.68	0.68	0.62	0.66	0.31
Ethers Imported	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.03
Blending Components Imported	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exports	0.87	0.85	0.86	0.85	0.80	0.78	0.81	0.65
Total Primary Supply⁶	18.03	21.00	20.96	20.68	20.63	20.02	20.45	19.08
Refined Petroleum Products Supplied								
Motor Gasoline ⁷	7.99	9.12	9.11	9.01	9.00	8.65	8.93	8.10
Jet Fuel ⁸	1.58	2.11	2.10	2.08	2.08	2.02	2.06	1.87
Distillate Fuel ⁹	3.32	3.87	3.84	3.78	3.77	3.69	3.73	3.58
Residual Fuel	0.90	0.83	0.84	0.82	0.81	0.79	0.81	0.79
Other ¹⁰	4.66	5.13	5.12	5.04	5.03	4.92	4.97	4.78
Total	18.45	21.05	21.01	20.74	20.69	20.07	20.49	19.12
Refined Petroleum Products Supplied								
Residential and Commercial	1.13	1.05	1.05	1.04	1.01	0.99	1.00	0.93
Industrial ¹¹	4.87	5.33	5.33	5.23	5.24	5.13	5.18	5.00
Transportation	12.12	14.48	14.46	14.30	14.28	13.82	14.16	13.04
Electric Generators ¹²	0.33	0.19	0.18	0.16	0.15	0.14	0.15	0.16
Total	18.45	21.05	21.01	20.74	20.69	20.07	20.49	19.12
Discrepancy ¹³	-0.42	-0.05	-0.05	-0.05	-0.05	-0.05	-0.04	-0.05
World Oil Price (1996 dollars per barrel) ¹⁴	20.48	20.26	20.12	19.71	19.96	19.32	19.89	18.72
Import Share of Product Supplied	0.46	0.56	0.56	0.56	0.56	0.55	0.56	0.52
Net Expenditures for Imported Crude Oil and Petroleum Products (billion 1996 dollars)								
Domestic Refinery Distillation Capacity	15.4	16.7	16.7	16.6	16.6	16.3	16.4	16.2
Capacity Utilization Rate (percent)	94.0	95.0	95.1	95.2	95.3	94.8	95.3	93.0

Table A11. Petroleum Supply and Disposition Balance (Continued)
(Million Barrels per Day, Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
5.86	5.82	5.74	5.74	5.63	5.67	5.50	5.18	5.00	4.93	4.93	4.88	4.73	4.60
0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.47	0.47	0.47	0.47	0.47	0.47	0.46
5.11	5.07	4.99	4.99	4.89	4.93	4.76	4.70	4.53	4.46	4.46	4.41	4.27	4.13
10.17	10.13	10.22	10.03	9.91	9.24	9.78	11.34	11.22	11.33	11.32	11.37	11.12	11.07
10.17	10.17	10.22	10.10	10.01	9.35	9.88	11.39	11.27	11.38	11.36	11.42	11.12	11.07
0.00	0.04	0.00	0.08	0.10	0.11	0.10	0.05	0.05	0.04	0.04	0.05	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16.03	15.95	15.96	15.77	15.54	14.91	15.28	16.52	16.23	16.26	16.25	16.25	15.85	15.66
2.15	2.18	2.17	2.35	2.35	2.33	2.33	2.43	2.56	2.54	2.67	2.64	2.51	2.46
0.29	0.25	0.26	0.28	0.28	0.43	0.41	0.29	0.28	0.29	0.31	0.28	0.49	0.47
0.82	0.79	0.80	0.78	0.76	0.72	0.74	0.77	0.70	0.70	0.66	0.62	0.69	0.60
3.14	2.74	2.73	1.86	2.25	1.09	1.14	3.96	3.37	3.27	2.99	3.11	1.74	2.27
2.96	2.80	2.80	1.93	2.28	1.49	1.55	3.58	3.09	2.99	2.81	2.98	1.74	2.39
0.95	0.74	0.75	0.70	0.68	0.30	0.31	1.04	0.93	0.93	0.88	0.83	0.74	0.63
0.06	0.06	0.06	0.05	0.05	0.00	0.00	0.11	0.10	0.10	0.07	0.07	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84	0.87	0.87	0.82	0.77	0.70	0.72	0.77	0.76	0.75	0.77	0.77	0.74	0.74
22.42	21.92	21.91	21.04	21.17	19.48	19.89	23.98	23.14	23.06	22.88	22.90	21.28	21.47
9.66	9.41	9.39	8.88	8.86	7.89	7.94	10.20	9.70	9.61	9.38	9.27	8.37	8.51
2.40	2.37	2.38	2.26	2.31	2.02	2.12	2.87	2.79	2.81	2.74	2.75	2.58	2.64
4.06	3.96	3.97	3.84	3.88	3.70	3.77	4.23	4.07	4.07	4.12	4.26	3.92	3.90
0.89	0.87	0.87	0.85	0.84	0.90	0.90	0.98	0.95	0.96	0.99	0.99	0.97	0.96
5.47	5.36	5.35	5.26	5.33	5.01	5.19	5.75	5.67	5.65	5.68	5.67	5.47	5.49
22.47	21.97	21.96	21.09	21.22	19.51	19.93	24.02	23.18	23.10	22.92	22.94	21.31	21.50
1.04	1.00	1.02	0.96	0.97	0.87	0.89	1.01	0.96	0.98	0.95	0.96	0.86	0.89
5.65	5.55	5.53	5.49	5.54	5.30	5.49	5.91	5.85	5.82	5.94	5.92	5.76	5.75
15.63	15.29	15.29	14.54	14.62	13.18	13.40	16.97	16.29	16.22	15.81	15.69	14.56	14.69
0.16	0.13	0.13	0.11	0.09	0.17	0.15	0.13	0.08	0.09	0.22	0.37	0.14	0.17
22.47	21.97	21.96	21.09	21.22	19.51	19.93	24.02	23.18	23.10	22.92	22.94	21.31	21.50
-0.05	-0.05	-0.05	-0.05	-0.05	-0.03	-0.03	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.02
20.77	19.99	19.60	18.72	18.49	17.54	16.85	21.69	20.14	19.65	19.73	19.40	18.38	17.71
0.59	0.59	0.59	0.56	0.57	0.53	0.55	0.64	0.63	0.63	0.62	0.63	0.60	0.62
103.21	96.11	94.89	81.85	82.54	65.92	66.90	123.11	108.06	105.23	103.12	102.12	85.88	85.45
16.9	16.8	16.8	16.6	16.4	16.4	16.2	17.5	17.1	17.2	17.2	17.2	16.7	16.5
95.1	95.2	95.2	95.0	95.0	90.9	94.5	95.1	95.2	95.2	95.1	95.2	95.2	95.0

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.

⁶Total crude supply plus natural gas plant liquids, other inputs, refinery processing gain, and net petroleum imports.

⁷Includes ethanol and ethers blended into gasoline.

⁸Includes naphtha and kerosene types.

⁹Includes distillate and kerosene.

¹⁰Includes 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.

¹¹Includes consumption by cogenerators.

¹²Includes all electric power generators except cogenerators, which produce electricity and other useful thermal energy.

¹³Balancing item. Includes unaccounted for supply, losses and gains.

¹⁴Average refiner acquisition cost for imported crude oil.

Note: Totals may not equal sum of components due to independent rounding.

Sources: 1996 expenditures for imported crude oil and petroleum products based on internal calculations. Other 1996 data: Energy Information Administration (EIA), *Petroleum Supply Annual 1996*, DOE/EIA-0340(96) (Washington, DC, June 1997). Projections: EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A12. Petroleum Product Prices
(1996 Cents per Gallon Unless Otherwise Noted)

Sector and Fuel	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
World Oil Price (1996 dollars per barrel)	20.48	20.26	20.12	19.71	19.96	19.32	19.89	18.72
Delivered Sector Product Prices								
Residential								
Distillate Fuel	98.4	105.3	106.5	111.9	124.8	135.3	132.0	170.4
Liquefied Petroleum Gas	100.0	104.5	105.5	107.5	114.1	118.9	117.9	134.7
Commercial								
Distillate Fuel	73.1	74.5	75.8	81.2	94.2	104.6	101.4	139.5
Residual Fuel	48.4	46.0	47.8	54.8	70.0	82.4	78.5	124.6
Residual Fuel (1996 dollars per barrel)	20.35	19.31	20.09	23.02	29.39	34.61	32.95	52.31
Industrial¹								
Distillate Fuel	76.3	75.3	76.7	82.3	95.2	105.7	102.4	140.2
Liquefied Petroleum Gas	67.3	57.9	58.9	60.9	67.3	72.1	71.1	87.8
Residual Fuel	44.8	41.1	42.6	49.7	64.9	77.5	73.4	119.0
Residual Fuel (1996 dollars per barrel)	18.81	17.28	17.88	20.89	27.27	32.55	30.84	49.98
Transportation								
Diesel Fuel (distillate) ²	123.5	117.4	119.5	124.4	137.2	147.4	144.1	180.4
Jet Fuel ³	74.6	72.5	74.4	79.1	91.6	100.4	98.0	131.6
Motor Gasoline ⁴	122.5	123.0	125.1	128.9	140.6	148.7	146.8	175.6
Liquefied Petroleum Gas	109.0	112.1	113.1	114.9	121.5	126.1	125.2	141.7
Residual Fuel	38.2	40.5	41.8	48.9	64.3	76.7	72.5	118.5
Residual Fuel (1996 dollars per barrel)	16.04	17.00	17.58	20.53	27.00	32.20	30.45	49.77
E85	141.7	146.2	146.5	146.8	149.2	148.1	150.1	162.4
M85	89.6	91.8	92.3	94.5	100.9	104.8	104.2	120.2
Electric Generators⁵								
Distillate Fuel	68.1	68.9	70.7	76.3	89.5	100.3	96.9	134.2
Residual Fuel	45.9	46.4	47.2	55.0	70.4	83.8	79.1	125.2
Residual Fuel (1996 dollars per barrel)	19.28	19.49	19.81	23.09	29.58	35.20	33.23	52.59
Refined Petroleum Product Prices⁶								
Distillate Fuel	108.7	107.0	109.0	114.0	126.9	137.2	133.9	170.6
Jet Fuel ³	74.6	72.5	74.4	79.1	91.6	100.4	98.0	131.6
Liquefied Petroleum Gas	73.6	68.1	69.2	71.4	77.5	82.5	81.3	97.8
Motor Gasoline ⁴	122.5	122.8	124.9	128.7	140.4	148.5	146.6	175.4
Residual Fuel	42.5	42.0	43.3	50.5	65.8	78.3	74.1	120.1
Residual Fuel (1996 dollars per barrel)	17.87	17.64	18.20	21.20	27.63	32.87	31.13	50.45
Average	102.8	101.9	103.7	107.8	119.0	127.0	125.0	153.7

Table A12. Petroleum Product Prices (Continued)
(1996 Cents per Gallon Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
20.77	19.99	19.60	18.72	18.49	17.54	16.85	21.69	20.14	19.65	19.73	19.40	18.38	17.71
107.9	122.9	121.6	145.2	141.3	192.0	180.9	108.5	130.9	129.3	141.6	138.6	181.2	168.6
107.9	114.7	114.0	123.1	120.8	144.9	139.6	107.8	117.5	114.5	120.7	119.9	141.5	133.1
77.3	92.3	91.0	114.5	110.7	161.2	150.1	78.5	100.5	98.5	110.7	107.7	150.5	137.9
47.6	66.3	64.0	93.8	88.4	150.0	137.5	50.5	78.3	76.1	90.7	87.3	139.6	124.6
20.01	27.86	26.88	39.38	37.15	63.01	57.75	21.23	32.90	31.97	38.08	36.66	58.65	52.33
78.7	93.7	92.4	115.8	112.2	162.2	151.2	81.3	102.7	100.1	112.3	109.3	152.1	139.6
60.5	67.2	66.7	75.6	73.5	98.1	93.1	60.3	70.0	66.7	73.1	72.7	93.8	86.2
44.0	62.5	60.4	89.2	84.7	144.5	132.2	47.3	74.4	72.1	85.9	82.8	133.4	119.5
18.47	26.23	25.36	37.47	35.58	60.70	55.53	19.86	31.26	30.28	36.10	34.79	56.04	50.20
117.8	132.9	131.7	155.1	151.5	199.5	189.1	114.0	135.2	132.4	144.6	141.6	185.1	172.4
75.8	90.3	88.7	110.1	106.4	151.1	141.3	77.8	98.9	97.0	108.2	105.3	144.9	133.4
125.4	139.3	137.2	155.5	152.7	191.6	182.5	124.0	142.0	139.1	149.3	146.0	180.2	169.1
113.7	120.4	119.6	128.6	126.4	149.8	144.8	110.1	119.8	117.1	123.2	122.5	143.4	135.4
43.5	62.3	60.2	89.2	84.7	144.7	132.5	46.1	73.6	71.6	85.3	82.8	134.1	120.6
18.25	26.17	25.30	37.45	35.59	60.76	55.64	19.35	30.93	30.08	35.83	34.78	56.32	50.67
149.6	150.2	148.7	146.5	144.2	175.4	166.6	148.3	144.8	142.9	147.9	144.5	170.7	160.6
92.5	99.1	97.6	107.7	105.6	126.0	120.3	92.9	101.5	99.7	105.6	104.1	122.6	116.1
72.3	88.0	86.5	111.4	107.5	154.5	143.7	74.4	96.9	94.3	104.3	101.4	144.0	131.3
49.2	69.2	67.1	97.6	93.7	153.3	141.6	53.2	84.8	82.5	100.6	99.1	150.5	138.8
20.67	29.08	28.19	41.00	39.34	64.40	59.47	22.36	35.62	34.67	42.25	41.63	63.22	58.31
108.4	123.5	122.3	145.6	142.0	190.3	179.6	106.3	127.7	125.0	135.7	131.6	176.5	163.4
75.8	90.3	88.7	110.1	106.4	151.1	141.3	77.8	98.9	97.0	108.2	105.3	144.9	133.4
71.5	78.1	77.8	86.3	84.3	108.1	103.1	71.8	81.5	78.5	84.6	84.2	104.5	96.9
125.2	139.1	137.0	155.3	152.5	191.4	182.3	123.9	141.8	139.0	149.2	145.9	180.1	168.9
44.6	63.5	61.4	90.4	85.8	146.1	133.8	47.2	74.7	72.7	86.4	83.7	135.0	121.3
18.73	26.65	25.77	37.95	36.04	61.37	56.18	19.81	31.39	30.53	36.27	35.15	56.69	50.96
104.1	117.0	115.4	133.4	130.3	169.1	159.9	102.9	120.6	117.9	127.5	124.4	158.9	147.9

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.

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

Sources: 1996 prices for gasoline, distillate, and jet fuel are based on prices in various issues of Energy Information Administration, *Petroleum Marketing Monthly*, DOE/EIA-0380(96/03-97/04) (Washington, DC, 1996-97). 1996 prices for all other petroleum products are derived from EIA, *State Energy Price and Expenditures Report: 1994*, DOE/EIA-0376(94) (Washington, DC, June 1997). **Projections:** EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A13. Natural Gas Supply and Disposition
(Trillion Cubic Feet per Year)

Supply, Disposition, and Prices	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Production								
Dry Gas Production ¹	19.02	21.43	21.63	21.15	21.91	22.26	22.10	23.77
Supplemental Natural Gas ²	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Net Imports								
Canada	2.72	4.49	4.63	4.56	4.68	4.79	5.07	5.39
Mexico	2.76	4.36	4.32	4.25	4.37	4.48	4.50	4.82
Liquefied Natural Gas	-0.02	-0.14	0.04	0.04	0.04	0.04	0.30	0.30
	-0.03	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Total Supply	21.86	26.03	26.37	25.82	26.70	27.16	27.28	29.27
Consumption by Sector								
Residential	5.23	5.37	5.36	5.25	5.10	4.91	5.01	4.52
Commercial	3.20	3.53	3.52	3.45	3.33	3.18	3.24	2.75
Industrial ³	8.43	9.23	9.23	9.05	9.35	9.19	9.37	9.19
Electric Generators ⁴	2.98	5.28	5.60	5.49	6.27	7.22	6.95	10.03
Lease and Plant Fuel ⁵	1.25	1.42	1.43	1.41	1.45	1.46	1.46	1.53
Pipeline Fuel	0.71	0.78	0.81	0.78	0.80	0.81	0.81	0.86
Transportation ⁶	0.01	0.17	0.17	0.16	0.17	0.16	0.17	0.15
Total	21.82	25.80	26.13	25.59	26.46	26.93	27.01	29.04
Discrepancy⁷	0.04	0.23	0.24	0.22	0.24	0.23	0.27	0.23

Table A13. Natural Gas Supply and Disposition (Continued)
(Trillion Cubic Feet per Year)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
23.67	24.11	23.91	25.94	25.94	25.78	25.69	26.91	28.26	28.09	29.44	29.11	27.74	27.20
0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.05	0.06	0.06	0.06	0.06	0.06	0.06
4.72	4.87	4.86	5.23	5.30	5.68	5.65	5.07	5.53	5.51	5.83	5.80	6.10	6.03
4.58	4.52	4.52	4.89	4.92	5.03	5.00	4.95	5.12	5.10	5.41	5.38	5.41	5.35
-0.15	0.06	0.06	0.06	0.06	0.32	0.32	-0.17	0.09	0.09	0.09	0.09	0.36	0.36
0.29	0.29	0.29	0.29	0.33	0.33	0.33	0.29	0.33	0.33	0.33	0.33	0.33	0.33
28.44	29.03	28.82	31.23	31.30	31.51	31.40	32.03	33.85	33.66	35.33	34.97	33.90	33.29
5.55	5.28	5.30	4.86	4.88	4.38	4.40	5.81	5.29	5.31	4.95	4.97	4.55	4.65
3.69	3.49	3.51	3.13	3.15	2.57	2.63	3.82	3.45	3.46	3.18	3.20	2.76	2.89
9.56	9.58	9.51	9.56	9.51	9.16	9.10	9.69	9.50	9.41	9.11	9.05	9.26	8.77
6.76	7.76	7.61	10.63	10.68	12.39	12.26	9.43	12.22	12.10	14.61	14.29	14.01	13.67
1.55	1.57	1.56	1.66	1.66	1.65	1.65	1.76	1.82	1.82	1.88	1.86	1.79	1.76
0.85	0.87	0.87	0.93	0.96	0.92	0.93	0.96	1.03	1.03	1.07	1.07	1.02	1.02
0.25	0.24	0.24	0.22	0.23	0.20	0.21	0.32	0.31	0.31	0.30	0.29	0.28	0.28
28.20	28.79	28.59	31.00	31.07	31.28	31.17	31.79	33.62	33.43	35.11	34.74	33.67	33.06
0.24	0.24	0.24	0.23	0.23	0.23	0.23	0.24	0.23	0.23	0.22	0.23	0.23	0.23

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.

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, 1996 values include net storage injections.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Figures for 1996 may differ from published data due to internal conversion factors.

Sources: 1996 supplemental natural gas: Energy Information Administration (EIA), *Natural Gas Monthly*, DOE/EIA-0130(97/6) (Washington, DC, June 1997). 1996 imports and dry gas production derived from: EIA, *Natural Gas Annual 1996*, DOE/EIA-0131(96) (Washington, DC, November 1997). 1996 transportation sector consumption: EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D052199A, FD07BLW.D080398B, and EARLY07.D052199A. Other 1996 consumption: EIA, *Short-Term Energy Outlook August 1997*. Online. <http://www.eia.doe.gov/emeu/steo/pub/upd/aug97/index.html> (August 21, 1997) with adjustments to end-use sector consumption levels for consumption of natural gas by electric wholesale generators based on EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D052199A, FD07BLW.D080398B, and EARLY07.D052199A. **Projections:** EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A14. Natural Gas Prices, Margins, and Revenue
(1996 Dollars per Thousand Cubic Feet, Unless Otherwise Noted)

Prices, Margins, and Revenue	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Source Price								
Average Lower 48 Wellhead Price ¹	2.24	2.20	2.18	2.15	2.21	2.26	2.24	2.57
Average Import Price	1.98	2.10	2.13	2.06	2.12	2.16	2.23	2.49
Average²	2.21	2.18	2.17	2.14	2.20	2.24	2.24	2.55
Delivered Prices								
Residential	6.37	5.79	5.85	6.25	7.05	7.81	7.52	10.29
Commercial	5.43	4.87	4.93	5.31	6.11	6.87	6.58	9.37
Industrial ³	3.05	2.88	2.96	3.31	4.04	4.78	4.49	7.09
Electric Generators ⁴	2.70	2.68	2.75	3.10	3.82	4.58	4.33	7.01
Transportation ⁵	5.57	5.99	6.06	6.45	7.18	7.91	7.62	10.25
Average⁶	4.26	3.82	3.88	4.24	4.93	5.62	5.36	7.87
Transmission and Distribution Margins⁷								
Residential	4.17	3.61	3.68	4.11	4.85	5.58	5.28	7.73
Commercial	3.23	2.69	2.76	3.18	3.91	4.63	4.34	6.82
Industrial ³	0.84	0.70	0.79	1.18	1.85	2.54	2.25	4.53
Electric Generators ⁴	0.49	0.50	0.58	0.96	1.62	2.34	2.09	4.45
Transportation ⁵	3.37	3.81	3.88	4.31	4.98	5.67	5.38	7.70
Average⁶	2.05	1.64	1.70	2.10	2.73	3.38	3.12	5.31
Transmission and Distribution Revenue (billion 1996 dollars)								
Residential	21.81	19.42	19.74	21.57	24.76	27.38	26.47	34.92
Commercial	10.34	9.50	9.71	10.96	13.00	14.72	14.07	18.78
Industrial ³	7.10	6.49	7.29	10.64	17.26	23.32	21.08	41.66
Electric Generators ⁴	1.47	2.67	3.24	5.29	10.18	16.89	14.52	44.68
Transportation ⁵	0.04	0.65	0.66	0.71	0.84	0.90	0.90	1.15
Total	40.76	38.72	40.64	49.16	66.04	83.21	77.04	141.18

Table A14. Natural Gas Prices, Margins, and Revenue (Continued)
(1996 Dollars per Thousand Cubic Feet, Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
2.33	2.38	2.35	2.78	2.79	3.03	3.14	2.62	3.02	3.03	3.71	3.61	3.53	3.35
2.39	2.40	2.38	2.82	2.83	3.07	3.09	2.76	3.11	3.13	3.82	3.72	3.57	3.39
2.34	2.39	2.36	2.79	2.80	3.04	3.13	2.64	3.03	3.05	3.73	3.63	3.54	3.36
5.72	6.83	6.73	8.83	8.70	11.98	11.63	5.97	7.99	7.95	9.42	9.29	11.70	10.93
4.75	5.84	5.74	7.82	7.69	11.03	10.66	4.70	6.68	6.65	8.10	7.97	10.42	9.63
3.06	4.08	3.98	5.91	5.77	8.90	8.54	3.35	5.21	5.18	6.53	6.42	8.75	8.03
2.88	3.89	3.81	5.83	5.71	8.82	8.50	3.28	5.08	5.06	6.44	6.29	8.66	7.90
6.72	7.82	7.69	9.66	9.45	12.67	12.16	7.37	9.21	9.13	10.44	10.32	12.56	11.83
3.87	4.85	4.76	6.63	6.50	9.57	9.24	4.07	5.85	5.83	7.14	7.02	9.35	8.62
3.38	4.44	4.38	6.04	5.90	8.95	8.49	3.33	4.95	4.90	5.69	5.66	8.17	7.57
2.40	3.45	3.39	5.03	4.89	7.99	7.52	2.06	3.65	3.60	4.37	4.34	6.88	6.28
0.72	1.69	1.63	3.12	2.97	5.86	5.41	0.71	2.18	2.13	2.81	2.79	5.21	4.67
0.54	1.51	1.46	3.04	2.92	5.78	5.37	0.64	2.05	2.01	2.72	2.66	5.13	4.54
4.38	5.43	5.33	6.87	6.66	9.64	9.03	4.73	6.17	6.09	6.72	6.69	9.02	8.47
1.52	2.46	2.41	3.84	3.70	6.53	6.10	1.43	2.82	2.78	3.42	3.38	5.81	5.26
18.76	23.47	23.20	29.37	28.78	39.19	37.37	19.32	26.22	26.05	28.20	28.12	37.14	35.23
8.86	12.05	11.87	15.77	15.41	20.55	19.79	7.87	12.57	12.44	13.89	13.86	18.98	18.15
6.89	16.22	15.45	29.83	28.26	53.72	49.20	6.84	20.68	20.01	25.59	25.26	48.29	40.97
3.62	11.68	11.09	32.35	31.14	71.58	65.80	5.99	25.01	24.35	39.69	37.95	71.82	62.07
1.08	1.30	1.27	1.54	1.51	1.93	1.86	1.54	1.90	1.87	2.00	1.96	2.51	2.38
39.21	64.72	62.88	108.86	105.10	186.97	174.03	41.56	86.39	84.72	109.38	107.15	178.74	158.80

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.

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.

Sources: 1996 industrial delivered prices based on Energy Information Administration (EIA), *Manufacturing Energy Consumption Survey 1991*. 1996 residential and commercial delivered prices, average lower 48 wellhead price, and average import price: EIA, *Natural Gas Monthly*, DOE/EIA-0130(97/06) (Washington, DC, June 1997). **Other 1996 values, and projections:** EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A15. Oil and Gas Supply

Production and Supply	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Crude Oil								
Lower 48 Average Wellhead Price ¹ (1996 dollars per barrel)	19.41	19.78	19.69	19.21	19.44	18.65	19.31	17.84
Production (million barrels per day)²								
U.S. Total	6.48	6.02	6.01	5.97	6.00	5.95	6.00	5.90
Lower 48 Onshore	3.76	3.39	3.39	3.36	3.38	3.34	3.38	3.31
Conventional	3.15	2.76	2.75	2.74	2.75	2.73	2.75	2.71
Enhanced Oil Recovery	0.61	0.63	0.63	0.63	0.63	0.61	0.63	0.60
Lower 48 Offshore	1.32	1.69	1.69	1.68	1.69	1.67	1.69	1.66
Alaska	1.40	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Lower 48 End of Year Reserves (billion barrels)	16.82	15.28	15.25	15.15	15.23	15.06	15.23	14.92
Natural Gas								
Lower 48 Average Wellhead Price ¹ (1996 dollars per thousand cubic feet)	2.24	2.20	2.18	2.15	2.21	2.26	2.24	2.57
Production (trillion cubic feet)³								
U.S. Total	19.01	21.43	21.63	21.15	21.91	22.26	22.10	23.77
Lower 48 Onshore	13.07	14.49	14.68	14.35	14.87	15.18	15.02	16.32
Associated-Dissolved ⁴	1.84	1.53	1.52	1.52	1.52	1.52	1.52	1.51
Non-Associated	11.23	12.96	13.16	12.83	13.35	13.66	13.50	14.81
Conventional	7.96	9.09	9.17	8.96	9.34	9.45	9.43	10.18
Unconventional	3.27	3.88	3.99	3.87	4.02	4.21	4.07	4.63
Lower 48 Offshore	5.50	6.41	6.42	6.27	6.51	6.56	6.55	6.92
Associated-Dissolved ⁴	0.80	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Non-Associated	4.70	5.49	5.50	5.35	5.59	5.64	5.63	6.01
Alaska	0.43	0.53	0.53	0.53	0.53	0.53	0.53	0.52
Lower 48 End of Year Reserves (trillion cubic feet)	157.23	172.31	171.86	172.02	171.58	170.55	171.25	168.10
Supplemental Gas Supplies (trillion cubic feet) ⁵	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Total Lower 48 Wells (thousands)	22.07	28.12	28.06	27.62	28.04	27.79	28.15	28.78

Table A15. Oil and Gas Supply (Continued)

Projections							Projections						
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
20.24	19.42	19.08	18.09	17.82	16.68	15.96	20.70	19.10	18.65	18.67	18.28	17.35	16.58
5.86	5.82	5.74	5.74	5.63	5.67	5.50	5.18	5.00	4.93	4.93	4.88	4.73	4.60
3.50	3.47	3.41	3.40	3.32	3.35	3.21	3.39	3.24	3.18	3.16	3.10	2.98	2.88
2.76	2.74	2.70	2.70	2.66	2.67	2.60	2.75	2.65	2.62	2.61	2.58	2.50	2.42
0.74	0.73	0.71	0.70	0.66	0.68	0.62	0.65	0.59	0.56	0.55	0.52	0.48	0.46
1.62	1.60	1.58	1.59	1.57	1.57	1.55	1.31	1.29	1.27	1.31	1.31	1.29	1.26
0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.47	0.47	0.47	0.47	0.47	0.47	0.46
15.60	15.49	15.23	15.20	14.87	14.97	14.37	14.95	14.32	14.06	13.97	13.76	13.27	12.84
2.33	2.38	2.35	2.78	2.79	3.03	3.14	2.62	3.02	3.03	3.71	3.61	3.53	3.35
23.67	24.11	23.91	25.94	25.94	25.77	25.69	26.91	28.26	28.09	29.44	29.11	27.74	27.20
16.31	16.73	16.55	18.14	18.18	18.09	17.97	18.87	19.75	19.82	20.55	20.32	19.48	19.01
1.45	1.45	1.44	1.44	1.43	1.44	1.43	1.32	1.30	1.30	1.30	1.30	1.28	1.26
14.86	15.28	15.12	16.70	16.75	16.65	16.55	17.55	18.45	18.53	19.24	19.02	18.20	17.75
9.99	10.11	10.15	11.05	11.02	11.19	11.13	12.08	12.65	12.70	13.19	13.01	12.44	11.95
4.86	5.17	4.97	5.65	5.73	5.46	5.41	5.47	5.80	5.83	6.05	6.01	5.76	5.80
6.80	6.82	6.80	7.25	7.21	7.13	7.17	7.43	7.90	7.66	8.29	8.19	7.66	7.58
0.91	0.91	0.90	0.91	0.90	0.90	0.90	0.84	0.84	0.83	0.84	0.84	0.84	0.83
5.88	5.91	5.89	6.34	6.30	6.23	6.27	6.58	7.06	6.82	7.45	7.35	6.82	6.76
0.56	0.56	0.56	0.56	0.56	0.55	0.55	0.62	0.61	0.61	0.61	0.61	0.60	0.60
180.45	179.42	178.89	178.60	178.20	180.42	185.00	172.73	175.74	175.00	189.12	188.41	193.82	194.55
0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.05	0.06	0.06	0.06	0.06	0.06	0.06
30.34	30.23	29.79	31.46	31.29	31.91	31.94	33.63	34.68	34.44	37.85	37.16	35.92	34.56

Ft. = feet.

¹Represents lower 48 onshore and offshore supplies.

²Includes lease condensate.

³Market 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.

Note: Totals may not equal sum of components due to independent rounding. Figures for 1996 may differ from published data due to internal conversion factors.

Sources: 1996 crude oil lower 48 average wellhead price: Energy Information Administration (EIA), Office of Integrated Analysis and Forecasting. 1996 total wells completed: EIA, Office of Integrated Analysis and Forecasting. 1996 lower 48 onshore, lower 48 offshore, Alaska crude oil production: EIA, *Petroleum Supply Annual 1996*, DOE/EIA-0340(96) (Washington, DC, June 1997). 1996 natural gas lower 48 average wellhead price, Alaska and total natural gas production, and supplemental gas supplies. EIA, *Natural Gas Monthly*, DOE/EIA-0130(97/06) (Washington, DC, June 1997). Other 1996 values: EIA, Office of Integrated Analysis and Forecasting. **Projections:** EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A16. Coal Supply, Disposition, and Prices
(Million Short Tons per Year, Unless Otherwise Noted)

Supply, Disposition, and Prices	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Production¹								
Appalachia	452	465	451	444	415	369	378	274
Interior	173	148	147	143	142	123	129	63
West	439	629	584	538	432	342	360	150
East of the Mississippi	564	551	537	530	516	467	480	332
West of the Mississippi	500	691	645	595	473	367	387	156
Total	1064	1242	1182	1124	989	834	867	487
Net Imports								
Imports	7	8	6	6	6	6	4	4
Exports	90	104	89	89	89	89	83	83
Total	-83	-96	-83	-83	-83	-83	-78	-78
Total Supply²	981	1146	1099	1041	906	750	789	409
Consumption by Sector								
Residential and Commercial	6	6	6	6	6	5	6	5
Industrial ³	70	77	76	69	56	48	52	38
Coke Plants	32	28	28	27	28	25	28	24
Electric Generators ⁴	896	1034	989	941	829	674	729	344
Total	1003	1146	1099	1043	918	753	814	412
Discrepancy and Stock Change⁵	-23	0	-0	-2	-12	-3	-25	-3
Average Minemouth Price								
(1996 dollars per short ton)	18.50	15.03	15.39	15.42	16.10	16.51	16.36	18.20
(1996 dollars per million Btu)	0.87	0.72	0.74	0.74	0.76	0.76	0.76	0.80
Delivered Prices (1996 dollars per short ton)⁶								
Industrial	32.28	28.68	31.28	46.23	72.61	97.49	87.93	175.48
Coke Plants	47.33	43.77	47.09	65.17	96.41	126.04	114.62	218.72
Electric Generators								
(1996 dollars per short ton)	26.45	23.37	25.96	39.81	64.24	88.34	79.18	167.83
(1996 dollars per million Btu)	1.29	1.17	1.28	1.97	3.13	4.24	3.81	7.74
Average	27.52	24.23	26.87	40.91	65.73	90.21	80.95	171.60
Exports⁷	40.77	36.27	37.03	36.75	36.96	36.62	37.15	36.80

Table A16. Coal Supply, Disposition, and Prices (Continued)
(Million Short Tons per Year, Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
479	401	397	306	300	196	192	458	385	378	238	234	111	111
135	122	125	89	94	35	34	128	72	72	45	44	11	11
673	510	528	229	235	82	70	791	349	374	123	125	21	23
555	479	476	378	370	228	222	545	442	433	274	271	119	119
732	553	573	246	260	85	72	831	364	391	131	132	24	26
1287	1032	1050	624	630	313	295	1376	805	824	405	404	144	145
8	4	4	4	4	1	1	8	4	4	4	4	1	1
113	89	89	89	89	76	76	130	93	93	93	93	75	75
-105	-85	-85	-85	-85	-75	-75	-122	-89	-89	-89	-89	-74	-74
1181	948	965	539	545	238	220	1254	716	735	316	315	70	71
7	6	6	5	5	4	4	7	6	6	5	5	4	4
79	61	62	48	50	37	38	82	61	61	57	57	41	42
26	24	23	23	21	22	20	22	16	16	15	14	14	13
1065	854	871	460	465	172	158	1144	630	650	235	243	11	12
1177	946	963	537	541	235	220	1254	713	733	312	319	71	71
4	2	3	3	4	3	0	0	3	2	4	-4	-1	1
14.29	14.72	14.34	16.42	16.18	18.29	18.68	12.53	14.29	13.95	16.24	16.15	20.50	20.33
0.69	0.70	0.69	0.75	0.74	0.79	0.80	0.61	0.67	0.66	0.72	0.72	0.84	0.83
27.58	65.34	62.47	119.45	111.74	224.73	205.92	25.83	81.21	79.35	104.28	102.10	195.43	173.98
42.45	87.78	84.30	152.49	143.38	277.69	255.68	40.36	107.18	104.96	135.28	132.78	246.16	220.20
22.20	57.03	53.90	109.56	101.13	214.75	199.31	19.56	71.95	69.42	95.33	92.81	197.61	175.23
1.11	2.81	2.68	5.23	4.88	9.95	9.12	1.00	3.48	3.39	4.52	4.42	8.80	7.83
23.02	58.36	55.21	112.28	103.75	222.39	205.57	20.33	73.57	71.05	98.93	96.23	206.64	182.95
34.98	35.97	35.68	35.51	35.64	36.01	36.11	32.52	33.40	33.41	32.82	32.93	33.84	33.79

¹Includes anthracite, bituminous coal, and lignite.

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.

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.

Sources: 1996 data derived from: Energy Information Administration (EIA), *Coal Industry Annual 1996*, DOE/EIA-0584(96) (Washington, DC, November 1997). Projections: EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A17. Renewable Energy Generating Capability and Generation
(Thousand Megawatts, Unless Otherwise Noted)

Capacity and Generation	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Electric Generators¹								
(excluding cogenerators)								
Net Summer Capability								
Conventional Hydropower	77.66	79.73	79.73	79.73	79.74	79.74	80.70	80.72
Geothermal ²	3.02	2.76	2.92	2.98	3.11	3.07	3.74	3.83
Municipal Solid Waste ³	3.26	3.66	3.66	3.65	3.66	3.65	3.66	3.63
Wood and Other Biomass ⁴	1.64	1.76	1.76	1.76	1.93	1.80	2.18	2.25
Solar Thermal	0.36	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Solar Photovoltaic	0.01	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Wind	1.85	2.75	2.75	2.72	4.22	4.97	6.27	15.73
Total	87.81	91.10	91.26	91.28	93.12	93.68	97.00	106.61
Generation (billion kilowatthours)								
Conventional Hydropower	346.28	312.51	312.50	312.48	312.53	312.51	317.03	317.04
Geothermal ²	15.70	16.12	17.25	17.66	18.61	18.32	23.01	23.60
Municipal Solid Waste ³	18.85	24.54	24.54	24.47	24.53	24.44	24.53	24.34
Wood and Other Biomass ⁴	7.27	8.72	17.72	16.51	18.30	16.27	19.51	16.74
Solar Thermal	0.82	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Solar Photovoltaic	0.00	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Wind	3.17	6.17	6.17	6.10	10.14	12.12	15.80	40.76
Total	392.09	369.22	379.33	378.37	385.27	384.81	401.04	423.64
Cogenerators⁵								
Net Summer Capability								
Municipal Solid Waste	0.43	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Biomass	5.44	6.42	6.41	6.34	6.35	6.32	6.32	6.26
Total	5.87	6.86	6.85	6.78	6.80	6.76	6.77	6.70
Generation (billion kilowatthours)								
Municipal Solid Waste	2.21	2.27	2.27	2.27	2.27	2.27	2.27	2.27
Biomass	39.40	44.47	44.42	43.97	44.21	44.19	44.01	43.80
Total	41.61	46.74	46.69	46.24	46.48	46.46	46.28	46.07

Table A17. Renewable Energy Generating Capability and Generation (Continued)
(Thousand Megawatts, Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
79.78	79.78	79.78	79.80	79.80	81.84	80.78	79.78	79.79	79.79	79.80	79.80	81.92	81.62
2.80	2.98	3.01	3.51	3.35	4.75	5.50	3.02	3.77	3.77	4.95	4.65	7.81	7.51
4.02	4.01	4.01	3.99	4.02	3.95	3.99	4.42	4.42	4.43	4.41	4.41	4.44	4.43
1.76	1.80	1.76	2.70	2.16	5.32	7.14	1.76	2.74	1.93	11.95	11.52	43.99	52.65
0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.54	0.54	0.54	0.54	0.54	0.54	0.54
0.22	0.22	0.22	0.22	0.22	0.39	0.39	0.56	0.56	0.56	0.56	0.56	0.91	0.91
2.75	4.47	4.21	9.44	10.97	18.17	39.60	3.52	15.87	13.40	38.08	38.75	51.37	64.07
91.77	93.71	93.44	100.10	100.95	114.85	137.84	93.60	107.68	104.40	140.29	140.23	190.97	211.74
313.01	312.97	312.97	312.96	312.98	321.93	317.52	313.15	313.10	313.09	313.12	313.12	322.35	321.31
16.79	18.04	18.23	21.72	20.61	30.37	35.65	19.87	25.08	25.05	33.35	31.24	53.35	51.27
27.05	26.96	26.99	26.78	27.00	26.49	26.82	29.83	29.76	29.83	29.75	29.74	29.88	29.83
8.72	17.64	17.34	21.01	16.76	36.40	49.01	8.72	22.52	16.99	83.07	80.01	305.05	365.64
1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.47	1.47	1.47	1.47	1.47	1.47	1.47
0.60	0.60	0.60	0.60	0.60	1.01	1.01	1.45	1.45	1.45	1.45	1.45	2.30	2.30
6.17	11.20	10.48	24.73	28.45	48.87	103.57	8.70	43.58	37.16	108.33	109.35	142.77	171.43
373.50	388.56	387.76	408.95	407.55	466.22	534.73	383.19	436.96	425.04	570.54	566.38	857.17	943.26
0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
6.70	6.68	6.71	6.60	6.74	6.44	6.65	6.84	6.96	6.97	6.93	6.95	6.94	6.91
7.14	7.13	7.16	7.05	7.19	6.89	7.10	7.29	7.41	7.42	7.38	7.40	7.39	7.36
2.30	2.30	2.30	2.29	2.30	2.29	2.29	2.32	2.32	2.32	2.32	2.32	2.32	2.31
47.26	47.40	47.63	46.94	48.31	45.62	47.65	48.89	50.23	50.31	50.20	50.46	50.49	50.24
49.56	49.69	49.92	49.23	50.61	47.91	49.94	51.21	52.55	52.63	52.51	52.77	52.80	52.56

¹Includes grid-connected utilities and nonutilities other than cogenerators. These nonutility facilities include small power producers, exempt wholesale generators and generators at industrial and commercial facilities which do not produce steam for other uses.

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.

Notes: Totals may not equal sum of components due to independent rounding. Net summer capability has been estimated for nonutility generators for AEO98. Net summer capability is used to be consistent with electric utility capacity estimates. Data for electric utility capacity are the most recently available as of August 25, 1997. Additional retirements are also determined on the basis of the size and age of the units. Therefore, capacity estimates may differ from other Energy Information Administration sources.

Sources: 1996 electric utility capability: Energy Information Administration (EIA), Form EIA-860 "Annual Electric Utility Report," 1996 nonutility and cogenerator capability: Form EIA-867, "Annual Nonutility Power Producer Report." 1996 generation: EIA, *Annual Energy Review 1996*, DOE/EIA-0384(96) (Washington, DC, July 1997). Projections: EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A18. Renewable Energy Consumption by Sector and Source¹
(Quadrillion Btu per Year)

Sector and Source	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Marketed Renewable Energy²								
Residential	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.62
Wood	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.62
Commercial³	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biomass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial⁴	1.82	2.11	2.11	2.09	2.10	2.10	2.09	2.08
Conventional Hydroelectric	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Municipal Solid Waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biomass	1.78	2.08	2.07	2.05	2.06	2.06	2.05	2.04
Transportation	0.10	0.18	0.18	0.13	0.13	0.13	0.13	0.13
Ethanol used in E85 ⁵	0.00	0.05	0.05	0.05	0.06	0.06	0.06	0.06
Ethanol used in Gasoline Blending	0.10	0.13	0.13	0.07	0.07	0.07	0.07	0.07
Electric Generators⁶	4.40	4.22	4.33	4.33	4.42	4.41	4.68	4.93
Conventional Hydroelectric	3.56	3.21	3.21	3.21	3.21	3.21	3.26	3.26
Geothermal	0.43	0.46	0.49	0.51	0.54	0.53	0.68	0.70
Municipal Solid Waste	0.30	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Biomass	0.06	0.08	0.16	0.15	0.16	0.14	0.17	0.15
Solar Thermal	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Solar Photovoltaic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wind	0.03	0.06	0.06	0.06	0.10	0.12	0.16	0.42
Total Marketed Renewable Energy	6.94	7.12	7.23	7.16	7.26	7.25	7.51	7.76
Non-Marketed Renewable Energy⁷								
Selected Consumption								
Residential	0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.03
Solar Hot Water Heating	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Geothermal Heat Pumps	0.01	0.01	0.01	0.02	0.01	0.02	0.01	0.02
Commercial	0.01	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Solar Thermal	0.01	0.03	0.03	0.03	0.03	0.03	0.03	0.03

Table A18. Renewable Energy Consumption by Sector and Source¹ (Continued)
(Quadrillion Btu per Year)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
0.61	0.61	0.61	0.62	0.62	0.63	0.64	0.62	0.63	0.63	0.64	0.64	0.67	0.68
0.61	0.61	0.61	0.62	0.62	0.63	0.64	0.62	0.63	0.63	0.64	0.64	0.67	0.68
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.25	2.25	2.25	2.23	2.29	2.17	2.27	2.35	2.39	2.39	2.39	2.40	2.40	2.39
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.21	2.21	2.22	2.20	2.26	2.13	2.23	2.31	2.35	2.35	2.35	2.37	2.36	2.35
0.23	0.19	0.19	0.22	0.23	0.53	0.51	0.31	0.29	0.29	0.40	0.38	0.69	0.69
0.09	0.09	0.09	0.10	0.10	0.09	0.09	0.13	0.14	0.14	0.14	0.14	0.13	0.13
0.13	0.09	0.10	0.12	0.13	0.45	0.42	0.18	0.15	0.15	0.26	0.24	0.56	0.56
4.30	4.47	4.46	4.75	4.72	5.53	6.34	4.47	5.11	5.00	6.58	6.49	9.72	10.46
3.22	3.22	3.22	3.22	3.22	3.31	3.26	3.22	3.22	3.22	3.22	3.22	3.31	3.30
0.49	0.53	0.53	0.64	0.61	0.95	1.12	0.59	0.75	0.75	1.01	0.95	1.71	1.63
0.43	0.43	0.43	0.43	0.43	0.42	0.43	0.48	0.48	0.48	0.48	0.48	0.48	0.48
0.08	0.16	0.15	0.19	0.15	0.32	0.44	0.08	0.20	0.15	0.74	0.71	2.72	3.26
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
0.06	0.12	0.11	0.25	0.29	0.50	1.06	0.09	0.45	0.38	1.11	1.12	1.47	1.76
7.39	7.52	7.52	7.83	7.86	8.87	9.75	7.75	8.42	8.31	10.01	9.92	13.47	14.21
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.05	0.05	0.05	0.05	0.05	0.06	0.06
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.04	0.04	0.04	0.04	0.05	0.05
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04

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 A8.

³Value is less than 0.005 quadrillion Btu per year and rounds to zero.

⁴Includes all electricity production by industrial and other cogenerators for the grid and for own use.

⁵Excludes motor gasoline component of E85.

⁶Includes 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.

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.

Notes: Totals may not equal sum of components due to independent rounding.

Sources: 1996 electric generators: Energy Information Administration (EIA), Form EIA-860, "Annual Electric Utility Report" and EIA, Form EIA-867, "Annual Nonutility Power Producer Report." 1996 ethanol: EIA, *Petroleum Supply Annual 1996*, DOE/EIA-0340(96/1) (Washington, DC, June 1997). Other 1996: EIA, Office of Integrated Analysis and Forecasting.

Projections: EIA, AEO98 National Energy Modeling System runs KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A19. Carbon Emissions by Sector and Source
(Million Metric Tons per Year)

Sector and Source	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
Residential								
Petroleum	27.3	24.0	24.0	23.7	23.1	22.4	22.8	21.0
Natural Gas	77.4	79.6	79.4	77.7	75.6	72.8	74.3	66.9
Coal	1.4	1.4	1.4	1.3	1.2	1.1	1.1	0.9
Electricity	179.9	217.6	212.3	202.6	187.5	166.3	174.4	122.6
Total	286.0	322.6	317.1	305.4	287.3	262.5	272.5	211.4
Commercial								
Petroleum	15.3	12.6	12.6	12.4	12.0	11.7	11.8	10.7
Natural Gas	47.4	52.3	52.2	51.1	49.3	47.1	48.1	40.8
Coal	2.1	2.3	2.3	2.3	2.2	2.1	2.2	1.9
Electricity	164.8	196.4	191.7	183.6	168.0	147.9	155.5	105.2
Total	229.6	263.6	258.8	249.4	231.5	208.9	217.5	158.6
Industrial¹								
Petroleum	104.8	110.5	110.1	108.7	108.2	105.5	106.6	101.8
Natural Gas ²	142.8	155.9	156.0	152.9	158.0	155.8	158.4	156.9
Coal	59.3	66.0	65.5	61.0	54.0	48.9	51.6	42.7
Electricity	169.2	203.4	198.4	189.4	178.0	155.7	164.9	116.1
Total	476.1	535.7	530.0	512.0	498.2	465.9	481.6	417.5
Transportation								
Petroleum ³	457.9	549.4	548.7	543.5	543.0	525.8	538.5	496.4
Natural Gas ⁴	10.5	14.0	14.5	14.0	14.3	14.3	14.5	15.0
Other ⁵	0.0	1.4	1.5	1.4	1.5	1.4	1.5	1.4
Electricity	2.8	4.2	4.1	4.0	3.7	3.4	3.5	2.5
Total³	471.2	569.0	568.7	563.0	562.5	544.9	557.9	515.3
Total Carbon Emissions⁶								
Petroleum ³	605.3	696.4	695.4	688.3	686.3	665.4	679.7	629.8
Natural Gas	278.1	301.9	302.1	295.9	297.2	290.0	295.2	279.6
Coal	62.8	69.7	69.2	64.6	57.4	52.1	54.8	45.6
Other ⁵	0.0	1.4	1.5	1.4	1.5	1.4	1.5	1.4
Electricity	516.7	621.5	606.4	579.6	537.1	473.2	498.3	346.4
Total³	1462.9	1690.9	1674.6	1629.8	1579.5	1482.2	1529.6	1302.7
Electric Generators⁷								
Petroleum	15.5	8.8	8.4	7.8	7.3	6.5	7.2	7.6
Natural Gas	40.3	77.8	82.5	80.8	92.3	106.3	102.3	147.7
Coal	460.9	534.9	515.5	491.0	437.5	360.4	388.9	191.1
Total	516.7	621.5	606.4	579.6	537.1	473.2	498.3	346.4
Total Carbon Emissions⁸								
Petroleum ³	620.8	705.2	703.8	696.1	693.6	671.9	686.9	637.4
Natural Gas	318.4	379.7	384.6	376.7	389.4	396.3	397.5	427.3
Coal	523.7	604.6	584.7	555.5	494.9	412.5	443.7	236.7
Other ⁵	0.0	1.4	1.5	1.4	1.5	1.4	1.5	1.4
Total³	1462.9	1690.9	1674.6	1629.8	1579.5	1482.2	1529.6	1302.7
Carbon Emissions (tons per person)								
	5.5	5.9	5.8	5.7	5.5	5.2	5.3	4.5

Table A19. Carbon Emissions by Sector and Source (Continued)
(Million Metric Tons per Year)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
23.3	22.5	22.7	21.4	21.6	19.5	19.8	22.2	21.0	21.3	20.6	20.8	18.6	19.1
82.3	78.3	78.5	72.0	72.3	64.9	65.2	86.1	78.4	78.7	73.4	73.6	67.4	69.0
1.4	1.2	1.2	1.0	1.0	0.9	0.9	1.4	1.1	1.1	1.0	1.0	0.9	0.9
230.3	198.8	199.7	143.9	143.3	101.9	97.6	265.7	190.3	192.6	129.5	131.4	81.3	80.7
337.3	300.7	302.0	238.3	238.2	187.1	183.5	375.4	290.8	293.7	224.4	226.8	168.1	169.6
12.5	12.0	12.0	11.3	11.4	10.0	10.3	12.1	11.4	11.5	11.1	11.2	10.0	10.3
54.6	51.7	51.9	46.4	46.7	38.1	39.0	56.6	51.1	51.2	47.1	47.4	40.9	42.8
2.5	2.3	2.3	2.1	2.1	1.7	1.7	2.6	2.3	2.3	2.1	2.2	1.7	1.8
207.6	178.0	179.6	126.3	126.3	85.6	82.7	227.3	160.4	162.9	107.8	109.8	65.8	66.1
277.2	244.1	245.9	186.1	186.5	135.3	133.7	298.6	225.2	227.9	168.1	170.5	118.3	121.0
115.7	113.7	113.5	113.5	114.1	109.2	113.8	120.7	121.9	121.8	127.0	126.5	120.2	120.6
162.4	163.1	161.9	164.1	163.5	158.2	157.2	167.4	165.6	164.1	160.7	159.6	161.6	154.0
67.1	56.4	56.6	48.4	48.9	41.4	41.8	66.9	53.6	53.4	50.4	50.0	41.1	40.8
214.3	185.6	185.4	135.6	136.1	95.2	92.9	226.6	163.8	164.4	110.8	112.3	69.5	66.7
559.4	518.7	517.4	461.5	462.5	403.9	405.8	581.6	504.9	503.7	449.0	448.4	392.4	382.0
592.9	580.9	580.9	552.6	555.4	495.7	505.0	644.1	618.8	616.4	598.9	594.8	547.2	551.9
16.2	16.4	16.4	17.1	17.6	16.6	16.8	19.0	19.7	19.7	20.3	20.2	19.3	19.3
2.5	2.6	2.6	2.5	2.5	2.3	2.4	3.8	3.8	3.8	3.7	3.7	3.4	3.5
5.1	4.6	4.6	3.4	3.4	2.4	2.3	6.4	4.8	4.8	3.3	3.3	2.0	2.0
616.7	604.5	604.4	575.6	578.8	517.1	526.4	673.2	647.1	644.8	626.3	622.1	571.9	576.7
744.3	729.1	729.1	698.7	702.6	634.3	648.9	799.1	773.1	771.0	757.6	753.3	696.0	701.9
315.5	309.5	308.7	299.7	300.0	277.8	278.2	329.0	314.8	313.8	301.6	300.8	289.1	285.1
70.9	59.8	60.1	51.4	52.0	43.9	44.4	70.8	57.0	56.7	53.6	53.2	43.6	43.4
2.5	2.6	2.6	2.5	2.5	2.3	2.4	3.8	3.8	3.8	3.7	3.7	3.4	3.5
657.4	567.0	569.4	409.1	409.0	285.0	275.6	726.0	519.4	524.8	351.3	356.8	218.6	215.5
1790.6	1667.9	1669.8	1461.5	1466.0	1243.4	1249.4	1928.7	1668.0	1670.1	1467.8	1467.8	1250.8	1249.4
7.5	6.2	6.1	5.0	4.5	7.9	6.9	5.9	3.8	4.1	9.3	15.7	6.1	7.6
99.5	114.2	112.0	156.4	157.1	182.3	180.4	138.8	179.8	178.1	215.0	210.2	206.1	201.2
550.4	446.6	451.3	247.7	247.3	94.8	88.2	581.3	335.8	342.6	127.0	130.8	6.4	6.7
657.4	567.0	569.4	409.1	409.0	285.0	275.6	726.0	519.4	524.8	351.3	356.8	218.6	215.5
751.8	735.3	735.3	703.8	707.1	642.2	655.8	805.0	776.9	775.0	767.0	769.1	702.1	709.4
415.0	423.7	420.7	456.1	457.1	460.2	458.6	467.8	494.6	491.9	516.5	511.0	495.3	486.3
621.3	506.4	511.3	299.1	299.4	138.7	132.6	652.1	392.8	399.4	180.5	184.0	50.0	50.1
2.5	2.6	2.6	2.5	2.5	2.3	2.4	3.8	3.8	3.8	3.7	3.7	3.4	3.5
1790.6	1667.9	1669.8	1461.5	1466.0	1243.4	1249.4	1928.7	1668.0	1670.1	1467.8	1467.8	1250.8	1249.4
6.0	5.6	5.6	4.9	4.9	4.2	4.2	6.0	5.2	5.2	4.5	4.5	3.9	3.9

¹Includes consumption by cogenerators.

²Includes lease and plant fuel.

³This includes international bunker fuels which, by convention, are excluded from the international accounting of carbon emissions. In the years from 1989 through 1996, international bunker fuels account for 22 to 24 million metric tons of carbon annually.

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

⁵Includes methanol and liquid hydrogen.

⁶Measured for delivered energy consumption.

⁷Includes all electric power generators except cogenerators, which produce electricity and other useful thermal energy.

⁸Measured for total energy consumption, with emissions for electric power generators distributed to the primary fuels.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Carbon coefficients from Energy Information Administration, (EIA) *Emissions of Greenhouse Gases in the United States 1996*, DOE/EIA-0573(96) (Washington, DC, October 1997). 1996 consumption estimates based on: EIA, *Short Term Energy Outlook, August 1997*, Online. <http://www.eia.doe.gov/emeu/steo/pub/upd/aug97/index.html> (August 21, 1997).

Projections: EIA, AEO98 National Energy Modeling System run KYBASE.D080398A, FD24ABV.D080398B, EARLY24.D052099A, FD09ABV.D080398B, EARLY09.D053199A, FD07BLW.D080398B, and EARLY07.D052199A.

Table A20. Macroeconomic Indicators
(Billion 1992 Chain-Weighted Dollars, Unless Otherwise Noted)

Indicators	1996	Projections						
		Reference	2005					
			1990+24%		1990+9%		1990-7%	
			2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
GDP Chain-Type Price Index (1992=1.000)	1.102	1.380	1.382	1.389	1.401	1.410	1.408	1.439
Real Gross Domestic Product	6928	8525	8520	8478	8474	8389	8454	8272
Real Consumption	4714	5738	5735	5715	5724	5676	5719	5624
Real Investment	1069	1513	1509	1498	1473	1469	1457	1428
Real Government Spending	1258	1386	1386	1380	1384	1366	1383	1351
Real Exports	857	1753	1753	1744	1746	1722	1744	1696
Real Imports	971	1859	1857	1858	1853	1856	1852	1853
Real Disposable Personal Income	5077	6206	6205	6181	6224	6148	6228	6113
AA Utility Bond Rate (percent)	7.57	7.14	7.17	7.17	7.55	7.28	7.70	7.49
Real Yield on Government 10 Year Bonds (percent)	4.99	3.78	3.79	3.78	3.97	3.88	4.04	3.96
Energy Intensity (thousand Btu per 1992 dollar of GDP)								
Delivered Energy	10.14	9.36	9.36	9.23	9.18	9.00	9.11	8.68
Total Energy	13.54	12.42	12.37	12.16	12.00	11.66	11.86	11.10
Consumer Price Index (1982-84=1.00)	1.57	2.04	2.04	2.05	2.07	2.09	2.09	2.15
Unemployment Rate (percent)	5.38	5.70	5.72	5.94	5.87	6.39	5.94	6.97
Unit Sales of Light-Duty Vehicles (million)	15.10	15.69	15.60	15.47	14.91	14.98	14.64	14.33
Millions of People								
Population with Armed Forces Overseas	266.1	287.1	287.1	287.1	287.1	287.1	287.1	287.1
Population (aged 16 and over)	204.2	223.8	223.8	223.8	223.8	223.8	223.8	223.8
Labor Force	133.9	149.7	149.7	149.5	149.6	149.1	149.6	148.5

Table A20. Macroeconomic Indicators (Continued)
(Billion 1992 Chain-Weighted Dollars, Unless Otherwise Noted)

Projections													
2010							2020						
Reference	1990+24%		1990+9%		1990-7%		Reference	1990+24%		1990+9%		1990-7%	
	2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start		2005 Start	Early Start	2005 Start	Early Start	2005 Start	Early Start
1.606	1.628	1.622	1.655	1.637	1.701	1.663	2.281	2.303	2.296	2.317	2.303	2.337	2.305
9429	9333	9385	9241	9363	9032	9312	10865	10815	10820	10796	10803	10782	10812
6347	6292	6327	6248	6330	6160	6338	7599	7573	7579	7583	7584	7636	7648
1745	1714	1739	1719	1754	1662	1768	2100	2101	2103	2098	2102	2095	2102
1499	1486	1490	1468	1481	1442	1469	1636	1622	1624	1622	1623	1621	1625
2337	2318	2323	2283	2300	2215	2256	3333	3316	3313	3282	3284	3218	3225
2519	2509	2529	2532	2559	2548	2620	4123	4153	4162	4195	4197	4290	4292
6891	6835	6867	6783	6860	6719	6874	8192	8144	8151	8153	8158	8214	8228
7.31	7.42	7.32	7.36	7.19	7.66	7.08	8.50	8.37	8.33	8.34	8.32	8.27	8.19
3.58	3.55	3.63	3.71	3.74	3.95	3.96	4.10	4.15	4.11	4.20	4.15	4.33	4.23
8.98	8.82	8.77	8.54	8.49	8.08	7.97	8.31	7.99	7.96	7.79	7.76	7.36	7.34
11.80	11.42	11.35	10.78	10.69	10.16	10.00	10.78	10.05	10.03	9.62	9.59	9.17	9.16
2.43	2.46	2.45	2.51	2.48	2.60	2.54	3.56	3.61	3.59	3.63	3.61	3.68	3.62
5.58	6.06	5.73	6.51	5.71	7.49	5.74	5.78	5.90	5.88	5.94	5.88	5.85	5.71
16.57	16.06	16.28	15.96	16.32	15.16	16.25	17.04	16.69	16.81	16.66	16.75	16.51	16.81
298.9	298.9	298.9	298.9	298.9	298.9	298.9	323.5	323.5	323.5	323.5	323.5	323.5	323.5
235.4	235.4	235.4	235.4	235.4	235.4	235.4	255.6	255.6	255.6	255.6	255.6	255.6	255.6
156.5	156.0	156.2	155.4	156.0	154.4	155.7	162.2	162.0	162.0	161.9	161.9	161.8	161.9

GDP = Gross domestic product.

Btu = British thermal unit.

Source: Simulations of the Data Resources, Inc. (DRI) Model of the U.S. Economy.