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* Tables in the AEO2001 contain projections to 2020. These projections have been extended to 2030 using the average growth rate from 2010-2020.

** Tables A17 is from AEO2001 Model Output

All AEO2001 supplemental tables may be found on the EIA website at
<http://www.eia.doe.gov/oiaf/aeo/supplement/index.html>

**Table 20. Energy Prices by Sector and Source
(1999 Dollars per Million Btu, Unless Otherwise Noted)
United States**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Residential	13.09	13.04	12.93	13.02	13.02	13.16	13.33	13.59	13.81	14.04
Primary Energy 1/	7.27	7.14	7.12	7.08	7.08	7.01	6.92	7.01	7.01	7.01
Petroleum Products 2/	9.06	9.16	9.18	9.10	9.22	9.37	9.49	9.64	9.78	9.92
Distillate Fuel	7.22	7.33	7.33	7.26	7.36	7.51	7.80	7.98	8.23	8.49
Liquefied Petroleum Gas	12.72	12.79	12.83	12.77	12.93	13.07	12.83	12.87	12.77	12.67
Natural Gas	6.82	6.65	6.63	6.61	6.60	6.53	6.44	6.55	6.56	6.57
Electricity	22.47	22.33	21.90	22.07	21.90	21.88	22.01	22.17	22.32	22.47
Commercial	12.86	12.70	12.39	12.21	11.95	11.75	11.96	12.37	12.70	13.03
Primary Energy 1/	5.39	5.32	5.35	5.38	5.43	5.53	5.55	5.74	5.85	5.96
Petroleum Products 2/	5.91	6.00	6.01	5.96	6.06	6.17	6.34	6.50	6.67	6.85
Distillate Fuel	5.02	5.12	5.12	5.05	5.14	5.28	5.55	5.75	6.00	6.27
Residual Fuel	3.62	3.64	3.64	3.64	3.66	3.69	3.77	3.85	3.93	4.01
Natural Gas 3/	5.37	5.27	5.31	5.35	5.40	5.50	5.50	5.71	5.81	5.92
Electricity	20.69	20.38	19.58	19.07	18.40	17.63	17.72	18.12	18.36	18.62
Industrial 4/	5.58	5.55	5.49	5.44	5.42	5.45	5.56	5.85	6.06	6.27
Primary Energy	4.24	4.23	4.25	4.23	4.29	4.38	4.48	4.72	4.90	5.09
Petroleum Products 2/	5.90	5.95	5.95	5.88	5.96	6.05	6.10	6.27	6.39	6.50
Distillate Fuel	5.18	5.28	5.29	5.23	5.32	5.45	5.73	5.94	6.21	6.48
Liquefied Petroleum Gas	7.86	7.91	7.94	7.84	7.94	8.01	7.75	7.83	7.75	7.66
Residual Fuel	3.35	3.36	3.36	3.37	3.38	3.42	3.50	3.58	3.66	3.74
Natural Gas 5/	3.24	3.14	3.17	3.20	3.24	3.31	3.45	3.76	4.01	4.28
Metallurgical Coal	1.61	1.60	1.59	1.58	1.57	1.54	1.49	1.44	1.39	1.35
Steam Coal	1.36	1.35	1.35	1.34	1.33	1.29	1.25	1.21	1.17	1.13
Electricity	12.94	12.83	12.34	12.03	11.61	11.24	11.27	11.62	11.82	12.02
Transportation	9.20	9.26	9.27	9.34	9.49	9.46	9.38	9.31	9.24	9.16
Primary Energy	9.19	9.25	9.25	9.32	9.48	9.45	9.36	9.29	9.22	9.14
Petroleum Products 2/	9.18	9.24	9.25	9.32	9.47	9.44	9.36	9.29	9.21	9.14
Distillate Fuel 6/	8.79	8.92	8.89	8.81	8.85	8.94	9.05	8.98	9.00	9.02
Jet Fuel 7/	5.07	5.20	5.25	5.24	5.31	5.47	5.75	5.88	6.10	6.32
Motor Gasoline 8/	10.60	10.62	10.64	10.80	11.02	10.93	10.75	10.68	10.55	10.43
Residual Fuel	3.07	3.10	3.10	3.12	3.13	3.18	3.25	3.33	3.41	3.49
Liquid Petroleum Gas 9/	14.17	14.20	14.19	14.10	14.22	14.26	13.96	13.84	13.64	13.43
Natural Gas 10/	6.91	6.78	6.80	6.85	6.91	7.04	7.17	7.32	7.47	7.62
Ethanol (E85) 11/	19.04	19.00	19.12	19.08	19.03	19.00	19.24	19.36	19.54	19.73
Methanol (M85) 12/	12.85	13.12	13.12	13.11	13.21	13.74	14.33	14.43	14.79	15.16
Electricity	14.91	14.62	14.33	14.07	13.68	13.47	13.21	13.06	12.86	12.66
Average End-Use Energy	8.98	8.98	8.91	8.91	8.94	8.95	9.01	9.17	9.28	9.40
Primary Energy	6.96	6.98	7.00	7.03	7.14	7.18	7.21	7.30	7.37	7.43
Electricity	18.86	18.71	18.15	17.95	17.54	17.20	17.30	17.59	17.79	18.00
Electric Generators 13/										
Fossil Fuel Average	1.55	1.53	1.52	1.51	1.49	1.54	1.68	1.86	2.04	2.24
Petroleum Products	3.56	3.63	3.70	3.78	3.84	4.11	4.27	4.35	4.48	4.61
Distillate Fuel	4.52	4.63	4.65	4.60	4.71	4.84	5.10	5.28	5.52	5.76
Residual Fuel	3.41	3.46	3.52	3.61	3.64	3.88	4.00	4.07	4.16	4.25
Natural Gas	2.99	2.88	2.88	2.91	2.93	3.03	3.24	3.59	3.91	4.26
Steam Coal	1.16	1.15	1.13	1.12	1.10	1.05	1.01	0.98	0.95	0.92
Average Price to All Users 14/										
Petroleum Products 2/	8.34	8.41	8.43	8.47	8.61	8.64	8.61	8.61	8.60	8.58
Distillate Fuel	7.95	8.08	8.06	7.99	8.05	8.18	8.36	8.38	8.47	8.57
Jet Fuel	5.07	5.20	5.25	5.24	5.31	5.47	5.75	5.88	6.10	6.32
Liquefied Petroleum Gas	8.76	8.82	8.84	8.74	8.85	8.88	8.58	8.62	8.49	8.36
Motor Gasoline 8/	10.60	10.62	10.64	10.80	11.02	10.93	10.75	10.68	10.55	10.43
Residual Fuel	3.23	3.26	3.26	3.27	3.28	3.33	3.41	3.49	3.57	3.66
Natural Gas	4.36	4.23	4.24	4.26	4.27	4.27	4.28	4.50	4.63	4.75
Coal	1.18	1.17	1.15	1.14	1.12	1.07	1.03	1.00	0.97	0.93
Ethanol (E85) 11/	19.04	19.00	19.12	19.08	19.03	19.00	19.24	19.36	19.54	19.73
Methanol (M85) 12/	12.85	13.12	13.12	13.11	13.21	13.74	14.33	14.43	14.79	15.16
Electricity	18.86	18.71	18.15	17.95	17.54	17.20	17.30	17.59	17.79	18.00

**Table 20. Energy Prices by Sector and Source
(1999 Dollars per Million Btu, Unless Otherwise Noted)
United States**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Non-Renewable Energy Expenditures										
by Sector (billion 1999 dollars)										
Residential	145.98	147.64	147.79	150.23	151.69	157.93	168.52	181.70	194.89	209.04
Commercial	108.93	109.67	108.85	109.04	108.59	111.72	120.89	129.51	139.45	150.14
Industrial	121.49	121.58	121.44	121.69	122.69	126.53	135.93	150.97	164.90	180.13
Transportation	258.10	264.86	270.48	278.17	287.92	302.06	323.87	344.96	368.65	393.97
Total Non-Renewable Expenditures	634.50	643.76	648.57	659.14	670.89	698.23	749.21	807.14	867.81	933.04
Trans. Renew. Expenditures	0.33	0.37	0.42	0.46	0.51	0.61	0.75	0.86	1.01	1.20
Total Expenditures	634.83	644.13	648.99	659.60	671.40	698.85	749.96	808.00	868.81	934.20

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

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

3/ Excludes independent power producers.

4/ Includes cogenerators.

5/ Excludes uses for lease and plant fuel.

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

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

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

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

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

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

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

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

Includes small power producers and exempt wholesale generators.

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

Btu = British thermal unit.

Sources: 1999 prices for gasoline, distillate, and jet fuel are based on prices in various issues of EIA, Petroleum Marketing Monthly, DOE/EIA-0380(99/03-2000/04) (Washington, DC, 1999-2000). 1999 prices for all other petroleum products are derived from the EIA, State Energy Price and Expenditure Report 1997, DOE/EIA-0376(97) (Washington, DC, July 2000). 1999 electric generators natural gas delivered price Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants." 1999 industrial gas delivered prices are based on EIA, Manufacturing Energy Consumption Survey 1994. 1999 residential and commercial natural gas delivered prices: EIA Natural Gas Monthly, DOE/EIA-0130(2000/06) (Washington, DC, June 2000). 1999 coal prices based on EIA, Quarterly Coal Report, DOE/EIA-0121(2000/1Q) (Washington, DC, August 2000), and EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A. 1999 electricity prices for commercial, industrial, and transportation: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A. Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 21. Residential Sector Supplement Table

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Equipment Stock (million units)										
Main Space Heaters										
Electric Heat Pumps	10.71	10.93	11.08	11.21	11.33	11.69	12.49	13.34	14.25	15.23
Electric Other	20.65	20.79	20.89	20.98	21.07	21.34	21.93	22.50	23.10	23.72
Natural Gas Heat Pumps	0.03	0.04	0.04	0.05	0.05	0.06	0.08	0.10	0.14	0.18
Natural Gas Other	58.40	59.27	60.24	61.16	62.07	64.73	69.57	74.38	79.72	85.45
Distillate	9.41	9.40	9.38	9.36	9.34	9.27	9.15	8.99	8.86	8.72
Liquefied Petroleum Gas	4.95	4.98	4.99	5.00	5.00	5.01	5.05	5.09	5.13	5.17
Kerosene	0.90	0.89	0.88	0.86	0.85	0.82	0.76	0.72	0.67	0.63
Wood Stoves	2.16	2.16	2.16	2.15	2.15	2.14	2.14	2.15	2.16	2.17
Geothermal Heat Pumps	0.59	0.63	0.67	0.70	0.73	0.83	0.98	1.13	1.33	1.55
Total	107.81	109.10	110.32	111.47	112.60	115.89	122.15	128.40	135.16	142.27
Space Cooling (million units)										
Electric Heat Pumps	10.71	10.93	11.08	11.21	11.33	11.69	12.49	13.34	14.25	15.23
Natural Gas Heat Pumps	0.03	0.04	0.04	0.05	0.05	0.06	0.08	0.10	0.14	0.18
Geothermal Heat Pumps	0.59	0.63	0.67	0.70	0.73	0.83	0.98	1.13	1.33	1.55
Central Air Conditioners	45.01	46.00	47.01	47.98	48.93	51.72	56.74	61.65	67.31	73.49
Room Air Conditioners	37.07	37.09	37.11	37.13	37.14	37.19	37.44	37.69	37.94	38.19
Total	93.41	94.70	95.92	97.07	98.19	101.48	107.73	113.91	120.69	127.87
Water Heaters (million units)										
Electric	42.23	42.68	43.00	43.30	43.60	44.46	46.17	47.80	49.56	51.39
Natural Gas	57.32	58.14	59.06	59.92	60.77	63.27	67.92	72.61	77.78	83.32
Distillate	5.02	5.00	4.98	4.95	4.92	4.83	4.68	4.53	4.38	4.24
Liquefied Petroleum Gas	3.57	3.59	3.60	3.61	3.61	3.62	3.66	3.73	3.79	3.85
Solar Thermal	0.35	0.35	0.35	0.34	0.34	0.34	0.33	0.32	0.32	0.31
Total	108.48	109.76	110.98	112.13	113.24	116.52	122.77	128.99	135.72	142.80
Cooking Equipment (million units) 1/										
Electric	67.10	67.93	68.66	69.35	70.02	71.99	75.68	79.57	83.65	87.95
Natural Gas	36.27	36.73	37.22	37.69	38.16	39.52	42.15	44.50	47.23	50.11
Liquefied Petroleum Gas	4.39	4.39	4.38	4.37	4.36	4.31	4.25	4.26	4.23	4.21
Total	107.76	109.04	110.26	111.42	112.54	115.82	122.09	128.33	135.08	142.19
Clothes Dryers (million units)										
Electric	62.98	64.15	65.28	66.34	67.38	70.38	75.73	80.96	86.83	93.13
Natural Gas	17.94	18.37	18.80	19.22	19.64	20.87	23.02	25.14	27.59	30.28
Total	80.92	82.53	84.08	85.57	87.02	91.25	98.75	106.10	114.41	123.36
Other Appliances (million units)										
Refrigerators	122.89	124.23	125.50	126.69	127.86	131.27	137.78	144.29	151.27	158.60
Freezers	33.70	33.71	33.72	33.72	33.72	33.70	34.39	35.57	36.55	37.55
Stock Average Equipment Efficiency										
Main Space Heaters										
Electric Heat Pumps (HSPF)	7.21	7.23	7.24	7.25	7.25	7.26	7.34	7.44	7.54	7.63
Natural Gas Heat Pumps (GCOP)	1.40	1.40	1.40	1.40	1.40	1.40	1.41	1.45	14.00	14.00
Geothermal Heat Pumps (COP)	3.40	3.40	3.40	3.40	3.40	3.40	3.41	3.46	3.48	3.51
Natural Gas Furnace (AFUE)	0.78	0.79	0.79	0.80	0.80	0.81	0.83	0.83	0.84	0.86
Distillate Furnace (AFUE)	0.80	0.81	0.81	0.81	0.81	0.82	0.82	0.82	0.83	0.83
Space Cooling										
Electric Heat Pumps (SEER)	10.84	10.89	10.95	10.99	11.03	11.11	11.29	11.49	11.68	11.87
Natural Gas Heat Pumps (GCOP)	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Geothermal Heat Pumps (EER)	13.50	13.50	13.91	14.16	14.45	15.44	16.89	15.89	16.13	16.36
Central Air Conditioners (SEER)	10.58	10.64	10.71	10.77	10.81	10.93	11.10	11.33	11.54	11.75
Room Air Conditioners (EER)	9.03	9.12	9.21	9.29	9.36	9.52	9.73	9.80	9.95	10.10
Water Heaters										
Electric (EF)	0.87	0.87	0.88	0.88	0.88	0.88	0.88	0.89	0.89	0.89
Natural Gas (EF)	0.55	0.55	0.56	0.56	0.56	0.56	0.57	0.57	0.57	0.58
Distillate (EF)	0.54	0.54	0.54	0.54	0.54	0.53	0.53	0.53	0.53	0.53
Liquefied Petroleum Gas (EF)	0.56	0.56	0.56	0.57	0.57	0.58	0.59	0.60	0.61	0.62
Other Appliances (kilowatthours per year) 2/										

Table 21. Residential Sector Supplement Table

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Refrigerators	789.18	758.84	730.96	705.39	681.55	618.51	548.28	514.08	468.68	427.28
Freezers	564.84	544.83	527.59	513.68	502.18	476.05	451.17	441.69	425.45	409.81
Building Shell Efficiency Index										
Space Heating										
Pre-1998 Homes	0.93	0.93	0.92	0.92	0.92	0.91	0.90	0.89	0.88	0.87
New Construction	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.79	0.79	0.78
All Homes	0.92	0.91	0.91	0.90	0.90	0.89	0.87	0.86	0.85	0.83
Space Cooling										
Pre-1998 Homes	0.95	0.95	0.95	0.95	0.94	0.94	0.94	0.93	0.93	0.93
New Construction	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.90	0.90	0.90
All Homes	0.94	0.94	0.94	0.94	0.94	0.93	0.93	0.92	0.92	0.91

1/ Does not include microwave ovens or outdoor grills.

2/ Kilowatthours per year to run the appliance under certain test conditions as specified by the Department of Energy.

HSPF = Heating Seasonal Performance Factor: The total heating output of a heat pump in Btu during its normal annual usage period for heating divided by total electric input in watt-hours during the same period.

COP = Coefficient of Performance: Energy efficiency rating measure determined, under specific testing conditions, by dividing the energy output by the energy input.

GCOP = Gas Coefficient of Performance: Energy efficiency rating measure determined, under specific testing conditions, by dividing the energy output by the energy input.

AFUE = Annual Fuel Utilization Efficiency: Efficiency rating based on average usage, including on and off cycling, as set out in the standardized Department of Energy test procedures.

SEER = Seasonal Energy Efficiency Ratio: The total cooling of a central unitary air conditioner or a unitary heat pump in Btu during its normal annual usage period for cooling divided by the total electric energy input in watt-hours during the same period.

EER = Energy Efficiency Ratio: A ratio calculated by dividing the cooling capacity in Btu per hour by the power input in watts at any given set of rating conditions, expressed in Btu per hour per watt.

EF = Efficiency Factor: Efficiency (measured in Btu out / Btu in) of water heaters under certain test conditions specified by the Department of Energy.

Btu = British thermal unit.

N/A = Not applicable.

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

Source: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 22. Commercial Sector Supplement Table

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Commercial Building Delivered Energy Consumption (quadrillion Btu) 1/										
Assembly	0.57	0.57	0.58	0.59	0.59	0.61	0.64	0.65	0.67	0.70
Education	0.76	0.77	0.79	0.80	0.81	0.84	0.89	0.92	0.96	1.00
Food Sales	0.16	0.16	0.16	0.17	0.17	0.18	0.18	0.19	0.20	0.20
Food Service	0.40	0.41	0.42	0.42	0.43	0.45	0.48	0.49	0.51	0.53
Health Care	0.60	0.61	0.62	0.64	0.65	0.69	0.75	0.79	0.85	0.91
Lodging	0.58	0.59	0.60	0.61	0.63	0.66	0.72	0.75	0.80	0.86
Office - Large	0.75	0.77	0.79	0.80	0.82	0.87	0.94	0.99	1.06	1.13
Office - Small	0.60	0.61	0.63	0.64	0.66	0.70	0.75	0.78	0.83	0.87
Mercantile/Service	1.24	1.27	1.29	1.31	1.33	1.39	1.46	1.50	1.56	1.63
Warehouse	0.43	0.44	0.45	0.46	0.47	0.50	0.54	0.57	0.61	0.66
Other	0.52	0.54	0.55	0.57	0.58	0.62	0.69	0.74	0.81	0.88
Total	6.61	6.74	6.88	7.00	7.14	7.51	8.05	8.38	8.85	9.35
Commercial Building Floorspace (billion square feet)										
Assembly	7.53	7.60	7.68	7.76	7.82	8.03	8.32	8.49	8.73	8.98
Education	9.13	9.32	9.49	9.66	9.83	10.34	11.07	11.47	12.08	12.72
Food Sales	0.75	0.76	0.77	0.78	0.79	0.82	0.86	0.88	0.90	0.93
Food Service	1.55	1.56	1.58	1.60	1.62	1.67	1.73	1.75	1.79	1.84
Health Care	1.96	1.99	2.02	2.05	2.08	2.17	2.28	2.37	2.48	2.60
Lodging	4.40	4.48	4.56	4.64	4.72	4.94	5.28	5.52	5.84	6.17
Office - Large	6.36	6.43	6.50	6.57	6.64	6.82	7.07	7.21	7.42	7.63
Office - Small	6.04	6.11	6.18	6.25	6.32	6.51	6.77	6.92	7.14	7.36
Mercantile/Service	14.93	15.14	15.34	15.55	15.76	16.37	17.16	17.63	18.30	19.00
Warehouse	10.26	10.45	10.63	10.80	10.97	11.38	11.89	12.18	12.59	13.03
Other	5.84	5.98	6.10	6.22	6.35	6.71	7.19	7.51	7.95	8.41
Total	68.73	69.82	70.85	71.88	72.90	75.75	79.62	81.94	85.21	88.63
Stock Average Equipment Efficiency 2/										
Space Heating										
Electricity	1.11	1.11	1.12	1.12	1.12	1.13	1.13	1.13	1.14	1.14
Natural Gas	0.76	0.77	0.77	0.77	0.77	0.78	0.79	0.79	0.80	0.80
Distillate	0.76	0.76	0.76	0.76	0.76	0.77	0.77	0.77	0.78	0.78
Space Cooling										
Electricity	2.72	2.76	2.80	2.84	2.87	2.97	3.11	3.22	3.35	3.48
Natural Gas	0.99	1.00	1.02	1.04	1.05	1.10	1.15	1.19	1.23	1.28
Water Heating										
Electricity	0.95	0.95	0.96	0.96	0.96	0.96	0.96	0.97	0.97	0.98
Natural Gas	0.76	0.77	0.77	0.78	0.78	0.79	0.79	0.80	0.81	0.81
Distillate	0.76	0.76	0.76	0.76	0.76	0.77	0.77	0.77	0.78	0.78
Ventilation (cubic feet per minute per Btu) 3/										
Electricity	0.41	0.41	0.41	0.41	0.42	0.42	0.44	0.45	0.47	0.48
Cooking										
Electricity	0.72	0.73	0.73	0.73	0.73	0.74	0.74	0.75	0.75	0.75
Natural Gas	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.52	0.52	0.52
Lighting Efficacy 4/ (efficacy in lumens per watt)										
Electricity	50.44	50.85	51.15	51.45	51.67	51.98	52.57	54.38	55.62	56.90
Refrigeration										
Electricity	1.33	1.33	1.33	1.34	1.34	1.35	1.35	1.35	1.36	1.36

1/ Excludes commercial sector energy consumption (from uses such as street lights) that is not attributable to buildings.

2/ Unless noted otherwise, the efficiency measures are in the terms of Btu of energy output divided by Btu of energy input.

3/ The efficiency measure for ventilation is in terms of cubic feet per minute (cfm) of ventilation air delivered divided by Btu of energy input.

4/ A measurement of the ratio of light produced by a light source to the electrical power used to produce that quality of light, expressed in lumens per watt.

Btu = British thermal unit.

Table 22. Commercial Sector Supplement Table

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

Source: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 23. Industrial Sector Macroeconomic Indicators

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
GDP (billion 1996 dollars)	10344.6	10641.8	10959.7	11273.3	11604.6	12666.7	14635.2	16514.9	18857.3	21532.1
Non-Agricultural Employment (million)	136.1	137.8	139.7	142.0	144.1	149.7	157.3	165.1	173.4	182.1
Value of Gross Output (billion 1992 dollars)										
Nonmanufacturing Sector										
Agricultural	292.9	295.2	298.6	303.0	306.5	317.2	338.9	362.2	387.1	413.7
Mining	173.7	174.2	174.7	175.3	176.5	182.6	195.6	207.9	221.8	236.6
Construction	572.6	584.1	596.9	612.8	628.1	662.6	730.3	800.1	879.2	966.2
Manufacturing Sector										
Food and Kindred Products	491.6	496.2	501.7	508.0	514.1	531.1	566.9	605.2	646.0	689.6
Tobacco Products	46.1	46.3	46.3	46.4	46.5	46.4	46.5	46.5	46.5	46.6
Textile Mill Products	64.0	64.1	64.5	65.2	65.5	66.6	68.7	70.3	72.1	74.1
Apparel and Other Textile Products	82.8	82.4	82.6	82.2	81.0	78.5	76.0	76.5	75.5	74.6
Lumber and Wood Products	109.7	110.6	111.8	113.5	115.0	118.9	126.1	132.9	140.5	148.5
Furniture and Fixtures	62.7	63.6	65.1	66.2	67.5	70.9	79.0	87.9	97.9	109.1
Paper and Allied Products	164.8	167.5	170.6	173.9	177.2	186.1	199.3	210.3	223.6	237.7
Printing and Publishing	190.4	192.7	196.1	199.7	203.3	212.8	228.9	247.7	267.3	288.4
Chemical and Allied Products	389.0	397.0	406.0	415.5	425.6	454.4	507.7	577.9	651.8	735.0
Bulk Chemicals	190.0	192.1	194.5	197.4	200.4	207.6	219.8	233.4	247.5	262.5
Other Chemicals and Allied Products	199.0	204.9	211.5	218.1	225.2	246.8	287.9	344.5	407.0	480.8
Petroleum and Coal Products	181.0	182.8	185.0	186.3	188.1	194.7	201.9	208.6	215.9	223.5
Petroleum Refining	161.7	163.4	165.3	166.3	167.8	173.7	179.7	185.2	191.2	197.4
Other Petroleum and Coal Products	19.3	19.4	19.7	20.0	20.3	21.0	22.2	23.4	24.8	26.2
Rubber and Miscellaneous Plastic Products	174.1	179.7	187.2	195.1	202.6	223.9	262.5	305.8	357.3	417.5
Leather and Leather Products	5.2	4.6	4.2	4.0	3.5	3.0	2.1	2.2	1.9	1.7
Stone, Clay, and Glass Products	80.2	80.9	81.9	83.2	84.4	86.9	91.3	96.1	101.0	106.3
Glass and Glass Products	22.0	22.2	22.5	22.9	23.3	24.2	25.7	27.2	28.8	30.5
Cement, Hydraulic	5.3	5.3	5.3	5.4	5.4	5.6	5.8	6.0	6.3	6.5
Other Stone, Clay, and Glass Products	53.0	53.4	54.1	54.9	55.7	57.1	59.8	62.8	65.9	69.2
Primary Metals Industry	175.4	176.9	179.5	181.8	184.3	189.8	198.9	205.6	214.0	222.7
Blast Furnace and Basic Steel Products	74.6	75.4	76.9	77.7	79.0	81.4	85.1	88.3	91.9	95.7
Aluminum	37.0	37.3	37.4	37.7	37.9	38.4	39.6	40.1	40.9	41.8
Other Primary Metal Products	63.8	64.2	65.2	66.3	67.4	70.0	74.1	77.3	81.2	85.3
Fabricated Metal Products	234.6	237.1	242.6	248.7	254.2	265.6	288.3	315.1	343.3	373.9
Industrial Machinery and Equipment	466.6	482.9	509.7	541.6	566.9	646.7	796.0	963.2	1175.4	1434.5
Electronic and Other Electric Equipment	530.2	559.5	597.6	644.3	684.3	813.1	1030.0	1349.7	1738.9	2240.4
Transportation Equipment	497.0	499.4	520.1	538.4	556.7	605.4	706.4	806.2	930.3	1073.5
Instruments and Related Products	176.3	182.0	188.8	197.2	205.3	229.1	275.8	330.6	397.0	476.9
Miscellaneous Manufacturing Industries	55.6	56.2	57.7	59.4	60.7	64.9	75.8	87.8	87.8	87.8
Total Industrial Gross Output	5216.5	5315.7	5469.3	5641.6	5798.0	6251.2	7093.0	8096.3	9214.0	10486.1

GDP = Gross domestic product.

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

Sources: 1999: Standard & Poors DRI, Simulation T250200. Projections: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 24. Refining Industry Energy Consumption

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Industry Output and Consumption 1/ Industry Output (billion 1992 dollars)	161.72	163.38	165.25	166.26	167.84	173.74	179.71	185.19	191.19	197.39
Energy Consumption (trillion Btu)										
Residual Oil	37.4	37.5	37.5	37.8	37.9	38.2	39.3	40.0	41.0	41.9
Distillate Oil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Liquefied Petroleum Gas	40.3	39.2	36.2	26.4	0.0	0.0	15.0	38.8	38.8	38.8
Petroleum Coke	590.8	594.7	614.1	641.4	670.0	697.6	772.5	791.6	843.2	898.1
Still Gas	1512.1	1573.9	1579.4	1550.5	1574.9	1610.0	1631.6	1682.7	1720.2	1758.6
Other Petroleum 2/ Petroleum Subtotal	2180.5	2245.4	2267.2	2256.0	2282.8	2345.8	2458.4	2553.0	2663.4	2778.5
Natural Gas	971.0	934.0	943.6	1015.5	1053.9	1059.7	1039.8	970.5	928.7	888.8
Steam Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Purchased Electricity	134.8	140.1	146.4	160.5	163.7	167.6	158.0	155.4	149.6	144.1
Total	3286.4	3319.6	3357.2	3432.0	3500.5	3573.1	3656.2	3678.9	3732.9	3787.8
Energy Consumption per Unit of Output (thousand Btu per 1992 dollar of output)										
Residual Oil	0.23	0.23	0.23	0.23	0.23	0.22	0.22	0.22	0.21	0.21
Distillate Oil	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Liquefied Petroleum Gas	0.25	0.24	0.22	0.16	0.00	0.00	0.08	0.21	0.21	0.21
Petroleum Coke	3.65	3.64	3.72	3.86	3.99	4.02	4.30	4.27	4.41	4.55
Still Gas	9.35	9.63	9.56	9.33	9.38	9.27	9.08	9.09	9.00	8.91
Other Petroleum 2/ Petroleum Subtotal	13.48	13.74	13.72	13.57	13.60	13.50	13.68	13.79	13.93	14.08
Natural Gas	6.00	5.72	5.71	6.11	6.28	6.10	5.79	5.24	4.86	4.50
Steam Coal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Purchased Electricity	0.83	0.86	0.89	0.97	0.98	0.96	0.88	0.84	0.78	0.73
Total	20.32	20.32	20.32	20.64	20.86	20.57	20.35	19.87	19.52	19.19
Carbon Dioxide Emissions 3/ (million metric tons carbon equivalent)	56.8	57.6	58.3	59.7	60.8	61.9	62.8	63.1	63.8	64.4

1/ Fuel consumption includes consumption for cogeneration.

2/ Includes lubricants and miscellaneous petroleum products.

3/ Includes emissions attributable to the fuels consumed to generate the purchased electricity.

Btu = British thermal unit.

N/A = Not applicable.

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

Source: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 25. Food Industry Energy Consumption

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Industry Output and Consumption 1/ Industry Output (billion 1992 dollars)	491.60	496.17	501.73	508.00	514.07	531.05	566.89	605.16	646.01	689.61
Energy Consumption (trillion Btu)										
Residual Oil	26.6	26.5	26.9	27.2	27.5	28.1	29.6	31.7	33.7	35.9
Distillate Oil	24.9	24.7	24.9	25.3	25.4	25.8	26.7	28.5	30.0	31.6
Liquefied Petroleum Gas	5.7	5.7	5.7	5.8	5.8	6.0	6.5	7.1	7.8	8.5
Other Petroleum 2/ Petroleum Subtotal	98.8 156.0	99.1 156.0	100.6 158.1	102.2 160.5	103.7 162.4	107.8 167.7	116.2 179.0	126.4 193.8	136.9 208.4	148.3 224.0
Natural Gas	688.8	696.1	701.9	708.5	714.8	731.7	770.4	810.2	852.6	897.2
Steam Coal	155.7	156.2	156.9	157.5	158.1	159.5	162.0	165.5	168.6	171.8
Renewables	13.7	13.9	14.1	14.3	14.5	15.0	16.2	17.5	18.9	20.4
Purchased Electricity	208.7	206.7	205.9	205.7	205.9	206.7	212.0	218.0	223.9	230.0
Total	1222.9	1228.9	1236.9	1246.5	1255.6	1280.5	1339.6	1405.1	1471.8	1541.7
Energy Consumption per Unit of Output (thousand Btu per 1992 dollar of output)										
Residual Oil	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Distillate Oil	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Liquefied Petroleum Gas	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Other Petroleum 2/ Petroleum Subtotal	0.20 0.32	0.20 0.31	0.20 0.32	0.20 0.32	0.20 0.32	0.20 0.32	0.20 0.32	0.21 0.32	0.21 0.32	0.22 0.32
Natural Gas	1.40	1.40	1.40	1.39	1.39	1.38	1.36	1.34	1.32	1.30
Steam Coal	0.32	0.31	0.31	0.31	0.31	0.30	0.29	0.27	0.26	0.25
Renewables	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Purchased Electricity	0.42	0.42	0.41	0.40	0.40	0.39	0.37	0.36	0.35	0.33
Total	2.49	2.48	2.47	2.45	2.44	2.41	2.36	2.32	2.28	2.24
Carbon Dioxide Emissions 3/ (million metric tons carbon equivalent)	27.4	27.4	27.4	27.5	27.6	27.9	28.9	30.0	31.2	32.4

1/ Fuel consumption includes consumption for cogeneration.

2/ Includes petroleum coke, lubricants, and miscellaneous petroleum products.

3/ Includes emissions attributable to the fuels consumed to generate the purchased electricity.

Btu = British thermal unit.

N/A = Not applicable.

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

Source: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 26. Paper Industry Energy Consumption

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Industry Output and Consumption 1/ Industry Output (billion 1992 dollars)	164.77	167.48	170.60	173.92	177.19	186.09	199.31	210.32	223.60	237.72
Energy Consumption (trillion Btu)										
Residual Oil	135.3	134.5	135.0	135.5	135.9	136.1	136.1	134.7	134.0	133.3
Distillate Oil	10.6	10.5	10.5	9.4	8.7	8.8	8.8	8.9	9.0	9.1
Liquefied Petroleum Gas	3.9	3.8	3.9	3.9	3.9	3.9	4.1	4.3	4.5	4.7
Petroleum Subtotal	149.9	148.9	149.4	148.7	148.5	148.8	149.1	148.0	147.5	147.1
Natural Gas	590.3	592.5	593.0	593.7	597.4	606.3	620.0	638.6	655.4	672.7
Steam Coal	269.1	267.7	266.6	266.7	266.7	266.2	265.9	263.5	262.2	260.9
Renewables	1561.9	1586.0	1613.9	1643.5	1672.9	1755.1	1881.3	1991.7	2121.7	2260.2
Purchased Electricity	258.0	255.9	255.2	255.3	256.1	260.0	268.0	276.8	285.5	294.6
Total	2829.1	2851.0	2878.0	2908.0	2941.7	3036.5	3184.4	3318.6	3469.3	3626.9
Energy Consumption per Unit of Output (thousand Btu per 1992 dollar of output)										
Residual Oil	0.82	0.80	0.79	0.78	0.77	0.73	0.68	0.64	0.60	0.56
Distillate Oil	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.04
Liquefied Petroleum Gas	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Petroleum Subtotal	0.91	0.89	0.88	0.86	0.84	0.80	0.75	0.70	0.66	0.62
Natural Gas	3.58	3.54	3.48	3.41	3.37	3.26	3.11	3.04	2.93	2.83
Steam Coal	1.63	1.60	1.56	1.53	1.51	1.43	1.33	1.25	1.17	1.10
Renewables	9.48	9.47	9.46	9.45	9.44	9.43	9.44	9.47	9.49	9.51
Purchased Electricity	1.57	1.53	1.50	1.47	1.45	1.40	1.34	1.32	1.28	1.24
Total	17.17	17.02	16.87	16.72	16.60	16.32	15.98	15.78	15.52	15.26
Carbon Dioxide Emissions 2/ (million metric tons carbon equivalent)	31.4	31.2	31.0	30.9	31.0	31.1	31.6	32.0	32.5	33.0

1/ Fuel consumption includes consumption for cogeneration.

2/ Includes emissions attributable to the fuels consumed to generate the purchased electricity.

Btu = British thermal unit.

N/A = Not applicable.

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

Source: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 27. Bulk Chemical Industry Energy Consumption

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Industry Output (billion 1992 dollars)	189.99	192.09	194.47	197.38	200.38	207.58	219.78	233.43	247.54	262.50
Energy Consumption (trillion Btu)										
Heat and Power										
Residual Oil	52.1	52.1	52.9	53.7	54.6	56.4	59.4	63.9	68.0	72.4
Distillate Oil	6.0	5.9	6.0	6.1	6.2	6.3	6.5	6.9	7.3	7.6
Liquefied Petroleum Gas	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.7	3.0	3.4
Other Petroleum 2/	493.4	495.4	502.6	510.7	519.1	537.6	568.4	609.0	648.1	689.8
Petroleum Subtotal	553.7	555.5	563.6	572.7	582.0	602.6	636.7	682.6	726.4	773.1
Natural Gas	1857.9	1879.9	1896.8	1918.3	1940.0	1990.0	2074.7	2167.7	2262.5	2361.4
Steam Coal	209.1	210.1	211.2	212.1	212.9	215.0	218.2	221.8	225.2	228.7
Purchased Electricity	484.4	480.9	480.0	480.9	483.0	485.4	493.2	506.7	517.7	528.9
Total Heat and Power	3105.0	3126.4	3151.5	3184.1	3217.9	3293.0	3422.8	3578.8	3730.8	3889.4
Feedstock										
Liquefied Petroleum Gas	1699.5	1715.0	1732.9	1755.4	1778.9	1833.7	1926.9	2032.6	2140.0	2253.1
Petrochemical Feedstocks	1373.2	1385.7	1400.2	1418.4	1437.3	1481.6	1557.0	1642.3	1729.1	1820.5
Natural Gas	748.5	755.3	763.3	773.2	783.5	807.6	848.7	895.2	942.5	992.3
Total Feedstocks	3821.2	3856.0	3896.4	3947.0	3999.7	4122.9	4332.6	4570.2	4811.7	5066.0
Total	6926.3	6982.4	7047.9	7131.1	7217.6	7415.9	7755.4	8148.9	8542.2	8954.5
Energy Consumption per Unit of Output (thousand Btu per 1992 dollar of output)										
Heat and Power										
Residual Oil	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Distillate Oil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Liquefied Petroleum Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Petroleum	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Petroleum Subtotal	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Natural Gas 2/	9.8	9.8	9.8	9.7	9.7	9.6	9.4	9.3	9.1	9.0
Steam Coal	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	0.9	0.9
Purchased Electricity	2.5	2.5	2.5	2.4	2.4	2.3	2.2	2.2	2.1	2.0
Total Heat and Power	16.3	16.3	16.2	16.1	16.1	15.9	15.6	15.3	15.1	14.8
Feedstock										
Liquefied Petroleum Gas	8.9	8.9	8.9	8.9	8.9	8.8	8.8	8.7	8.6	8.6
Petrochemical Feedstocks	7.2	7.2	7.2	7.2	7.2	7.1	7.1	7.0	7.0	6.9
Natural Gas 2/	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.8	3.8	3.8
Total Feedstocks	20.1	20.1	20.0	20.0	20.0	19.9	19.7	19.6	19.4	19.3
Total	36.5	36.3	36.2	36.1	36.0	35.7	35.3	34.9	34.5	34.1
Carbon Dioxide Emissions 3/ (million metric tons carbon equivalent)										
	86.9	87.2	87.6	88.2	89.0	90.6	93.8	97.7	101.5	105.5

1/ Fuel consumption includes consumption for cogeneration.

2/ Includes petroleum coke, lubricants, and miscellaneous petroleum products.

3/ Includes emissions attributable to the fuels consumed to generate the purchased electricity.

Btu = British thermal unit.

N/A = Not applicable.

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

Source: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 28. Glass Industry Energy Consumption

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Industry Output and Consumption 1/ Industry Output (billion 1992 dollars)	21.96	22.21	22.52	22.94	23.32	24.22	25.71	27.20	28.83	30.55
Energy Consumption (trillion Btu)										
Residual Oil	4.1	4.0	4.0	4.0	4.1	4.1	4.2	4.5	4.7	5.0
Distillate Oil	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Liquefied Petroleum Gas	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.8
Petroleum Subtotal	5.2	5.0	5.1	5.1	5.2	5.2	5.4	5.8	6.1	6.4
Natural Gas	164.4	164.9	165.5	166.8	167.8	169.6	172.5	175.1	178.0	180.9
Purchased Electricity	32.0	32.1	32.4	32.8	33.1	33.7	34.7	35.7	36.7	37.8
Total	201.6	202.0	203.0	204.7	206.1	208.5	212.5	216.6	220.8	225.0
Energy Consumption per Unit of Output (thousand Btu per 1992 dollar of output)										
Residual Oil	0.19	0.18	0.18	0.18	0.17	0.17	0.16	0.17	0.16	0.16
Distillate Oil	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02
Liquefied Petroleum Gas	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
Petroleum Subtotal	0.24	0.23	0.22	0.22	0.22	0.22	0.21	0.21	0.21	0.21
Natural Gas	7.49	7.42	7.35	7.27	7.20	7.00	6.71	6.44	6.17	5.92
Purchased Electricity	1.46	1.45	1.44	1.43	1.42	1.39	1.35	1.31	1.27	1.24
Total	9.18	9.10	9.01	8.92	8.84	8.61	8.27	7.96	7.66	7.37
Carbon Dioxide Emissions 2/ (million metric tons carbon equivalent)	4.1	4.1	4.1	4.1	4.1	4.2	4.2	4.3	4.4	4.5

1/ Fuel consumption includes consumption for cogeneration.

2/ Includes emissions attributable to the fuels consumed to generate the purchased electricity.

Btu = British thermal unit.

N/A = Not applicable.

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

Source: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 29. Cement Industry Energy Consumption

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Industry Output and Consumption 1/ Industry Output (billion 1992 dollars)	5.28	5.29	5.32	5.37	5.43	5.56	5.76	6.03	6.28	6.54
Energy Consumption (trillion Btu)										
Residual Oil	1.1	1.1	1.1	1.1	1.1	1.0	1.0	0.9	0.9	0.8
Distillate Oil	3.2	3.2	3.1	3.1	3.1	2.9	2.7	2.6	2.4	2.2
Other Petroleum 2/ Petroleum Subtotal	65.0 69.3	64.6 68.9	64.5 68.7	64.6 68.8	64.7 68.9	64.8 68.7	64.7 68.4	65.4 68.9	65.7 69.0	66.0 69.0
Natural Gas	28.4	28.7	28.4	28.0	27.7	26.7	25.2	23.0	21.4	19.8
Steam Coal	255.6	253.6	253.3	253.4	254.1	254.4	254.5	258.4	260.5	262.5
Purchased Electricity	43.8	43.7	43.8	43.9	44.2	44.6	45.0	46.0	46.7	47.5
Total	397.1	394.9	394.1	394.1	394.8	394.4	393.0	396.3	397.3	398.3
Energy Consumption per Unit of Output (thousand Btu per 1992 dollar of output)										
Residual Oil	0.21	0.20	0.20	0.20	0.19	0.18	0.17	0.15	0.14	0.13
Distillate Oil	0.62	0.60	0.59	0.59	0.57	0.53	0.47	0.43	0.38	0.34
Other Petroleum 2/ Petroleum Subtotal	12.32 13.14	12.23 13.03	12.13 12.92	12.03 12.81	11.92 12.69	11.65 12.36	11.23 11.87	10.84 11.42	10.46 10.98	10.09 10.55
Natural Gas	5.38	5.44	5.33	5.21	5.10	4.81	4.38	3.82	3.40	3.03
Steam Coal	48.45	47.98	47.60	47.21	46.81	45.75	44.20	42.85	41.46	40.12
Purchased Electricity	8.30	8.26	8.23	8.18	8.15	8.02	7.82	7.63	7.44	7.26
Total	75.27	74.71	74.08	73.42	72.74	70.94	68.27	65.71	63.24	60.87
Carbon Dioxide Emissions 3/ (million metric tons carbon equivalent)	10.5	10.4	10.4	10.4	10.4	10.4	10.3	10.4	10.5	10.5

1/ Fuel consumption includes consumption for cogeneration.

2/ Includes petroleum coke, lubricants, and miscellaneous petroleum products.

3/ Includes emissions attributable to the fuels consumed to generate the purchased electricity.

Btu = British thermal unit.

N/A = Not applicable.

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

Source: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 30. Iron and Steel Industries Energy Consumption

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Industry Output (billion 1992 dollars)	74.64	75.39	76.91	77.73	79.02	81.39	85.12	88.25	91.89	95.69
Energy Consumption (trillion Btu)										
Residual Oil	39.8	38.4	38.4	38.1	38.0	37.1	36.0	36.2	35.7	35.3
Other Petroleum 2/ Petroleum Subtotal	60.9 100.6	60.0 98.5	60.1 98.6	59.6 97.7	59.6 97.6	58.4 95.5	56.6 92.7	55.3 91.5	53.9 89.6	52.4 87.7
Natural Gas	461.8	463.6	466.5	466.6	468.6	470.0	474.1	476.3	479.4	482.6
Metallurgical Coal	717.3	703.8	690.5	677.5	664.8	627.9	570.9	519.1	472.0	429.2
Net Coke Imports	98.0	105.1	116.6	124.0	134.1	155.9	191.0	222.8	266.3	318.4
Steam Coal	75.6	74.9	75.4	75.5	75.9	76.3	77.2	79.5	81.2	82.9
Coal Subtotal	890.9	883.8	882.6	877.0	874.8	860.1	839.2	821.5	802.8	784.5
Purchased Electricity	157.2	157.8	160.6	161.8	164.2	167.9	173.8	179.1	185.0	191.0
Total	1610.5	1603.8	1608.3	1603.2	1605.2	1593.5	1579.8	1568.3	1555.9	1543.5
Energy Consumption per Unit of Output (thousand Btu per 1992 dollar of output)										
Residual Oil	0.53	0.51	0.50	0.49	0.48	0.46	0.42	0.41	0.39	0.37
Other Petroleum 2/ Petroleum Subtotal	0.82 1.35	0.80 1.31	0.78 1.28	0.77 1.26	0.75 1.24	0.72 1.17	0.67 1.09	0.63 1.04	0.59 0.97	0.55 0.92
Natural Gas	6.19	6.15	6.07	6.00	5.93	5.77	5.57	5.40	5.22	5.04
Metallurgical Coal	9.61	9.34	8.98	8.72	8.41	7.71	6.71	5.88	5.14	4.49
Net Coke Imports	1.31	1.39	1.52	1.59	1.70	1.92	2.24	2.52	2.90	3.33
Steam Coal	1.01	0.99	0.98	0.97	0.96	0.94	0.91	0.90	0.88	0.87
Coal Subtotal	11.94	11.72	11.48	11.28	11.07	10.57	9.86	9.31	8.74	8.20
Purchased Electricity	2.11	2.09	2.09	2.08	2.08	2.06	2.04	2.03	2.01	2.00
Total	21.58	21.27	20.91	20.62	20.31	19.58	18.56	17.77	16.93	16.13
Carbon Dioxide Emissions 3/ (million metric tons carbon equivalent)	39.1	38.9	39.0	38.8	38.9	38.6	38.3	38.0	37.7	37.4

1/ Fuel consumption includes consumption for cogeneration.

2/ Includes petroleum coke, lubricants, and miscellaneous petroleum products.

3/ Includes emissions attributable to the fuels consumed to generate the purchased electricity.

Btu = British thermal unit.

N/A = Not applicable.

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

Source: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 31. Aluminum Industry Energy Consumption

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Industry Output (billion 1992 dollars)	37.00	37.29	37.40	37.71	37.92	38.43	39.61	40.08	40.93	41.80
Energy Consumption (trillion Btu)										
Distillate Oil	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Liquefied Petroleum Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Petroleum Coke	13.9	13.9	13.8	13.8	13.7	13.6	13.5	13.3	13.1	13.0
Other Petroleum	30.1	30.1	30.0	30.1	30.0	29.8	29.9	29.5	29.3	29.1
Petroleum Subtotal	44.2	44.2	44.0	44.0	43.9	43.6	43.5	42.9	42.6	42.2
Natural Gas	79.1	79.0	78.6	78.6	78.4	77.7	77.4	76.1	75.3	74.5
Steam Coal	74.7	74.5	74.1	74.0	73.8	73.1	72.8	72.0	71.4	70.9
Purchased Electricity	206.7	206.6	205.7	205.7	205.4	203.8	203.4	200.4	198.8	197.1
Total	404.6	404.3	402.3	402.3	401.5	398.2	397.1	391.4	388.0	384.7
Energy Consumption per Unit of Output (thousand Btu per 1992 dollar of output)										
Distillate Oil	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Liquefied Petroleum Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum Coke	0.38	0.37	0.37	0.37	0.36	0.35	0.34	0.33	0.32	0.31
Other Petroleum	0.81	0.81	0.80	0.80	0.79	0.78	0.75	0.74	0.72	0.70
Petroleum Subtotal	1.19	1.18	1.18	1.17	1.16	1.13	1.10	1.07	1.04	1.01
Natural Gas	2.14	2.12	2.10	2.08	2.07	2.02	1.95	1.90	1.84	1.78
Steam Coal	2.02	2.00	1.98	1.96	1.95	1.90	1.84	1.80	1.74	1.70
Purchased Electricity	5.59	5.54	5.50	5.46	5.42	5.30	5.13	5.00	4.86	4.72
Total	10.94	10.84	10.76	10.67	10.59	10.36	10.02	9.77	9.48	9.20
Carbon Dioxide Emissions 2/ (million metric tons carbon equivalent)	14.2	14.1	14.0	13.9	13.8	13.5	13.4	13.1	12.9	12.7

1/ Fuel consumption includes consumption for cogeneration.

2/ Includes emissions attributable to the fuels consumed to generate the purchased electricity.

Btu = British thermal unit.

N/A = Not applicable.

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

Source: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

**Table 32. Other Industrial Sector Energy Consumption
(Trillion Btu)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
(thousand Btu per 1992 dollar of output)	0.88	0.88	0.87	0.86	0.85	0.83	0.79	0.77	0.74	0.71
Carbon Dioxide Emissions 1/ (million metric tons carbon equivalent)	49.5	50.4	52.0	53.8	55.8	60.5	69.8	81.4	94.4	109.5
Other Manufacturing Consumption										
Residual Oil	88.2	88.0	89.5	91.1	92.5	96.0	102.8	113.3	123.1	133.7
Distillate Oil	96.7	95.7	97.4	99.8	100.8	104.4	111.4	123.1	133.7	145.2
Liquid Petroleum Gas	31.1	30.8	31.4	32.1	32.5	34.0	37.5	42.4	47.3	52.9
Petroleum Subtotal	216.0	214.5	218.3	222.9	225.8	234.4	251.6	278.8	304.0	331.6
Natural Gas	1318.4	1334.7	1352.9	1371.9	1389.5	1439.2	1538.6	1657.7	1779.1	1909.4
Steam Coal	165.0	165.9	167.2	168.6	169.8	173.3	180.1	188.7	196.9	205.4
Renewables	350.5	356.4	364.6	373.1	381.1	404.5	449.7	504.5	563.5	629.3
Purchased Electricity	823.7	829.9	841.7	854.3	866.0	898.2	961.0	1038.4	1116.5	1200.4
Total	2873.6	2901.4	2944.8	2990.8	3032.3	3149.6	3381.0	3668.1	3958.5	4271.9
Industry Output (billion 1992 dollars)	1125.70	1142.22	1166.10	1191.10	1214.18	1280.84	1409.76	1565.73	1731.12	1913.98
Energy Consumption per Unit of Output (thousand Btu per 1992 dollar of output)	2.55	2.54	2.53	2.51	2.50	2.46	2.40	2.34	2.29	2.23
Carbon Dioxide Emissions 1/ (million metric tons carbon equivalent)	68.7	69.0	69.6	70.2	71.1	72.9	77.4	83.1	88.7	94.7

1/ Includes emissions attributable to the fuels consumed to generate the purchased electricity.

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

Source: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 33. Transportation Sector Energy Use by Mode and Type (Trillion Btu)

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Mode and Type										
Energy Use by Mode										
Highway										
Light-Duty Vehicles	16275.0	16626.7	16968.3	17312.0	17628.6	18513.6	19832.4	20980.6	22334.8	23776.4
Automobiles	7655.6	7630.2	7612.8	7599.1	7582.7	7553.5	7561.4	7711.0	7791.0	7871.8
Light Trucks	8597.4	8974.6	9333.6	9691.1	10024.1	10938.3	12249.4	13247.4	14578.8	16043.9
Motorcycles	22.0	21.9	21.9	21.8	21.8	21.7	21.7	22.1	22.4	22.6
Commercial Light Trucks 1/	651.1	659.9	671.5	684.2	695.6	726.1	776.1	827.7	883.7	943.5
Buses	186.8	187.7	188.4	189.0	189.5	190.2	189.1	186.5	184.7	182.8
Transit	89.3	89.7	90.1	90.4	90.6	91.0	90.4	89.2	88.3	87.4
Intercity	24.0	24.1	24.2	24.3	24.3	24.4	24.3	23.9	23.7	23.5
School	73.5	73.8	74.1	74.3	74.5	74.8	74.4	73.4	72.6	71.9
Freight Trucks 2/	4827.5	4910.2	5017.5	5130.6	5230.0	5486.7	5937.0	6432.0	6964.1	7540.3
Medium (1000-26000 pounds)	890.6	889.0	898.1	905.3	916.7	960.6	1058.3	1189.5	1323.6	1472.9
Large (> 26000 pounds)	3937.0	4021.2	4119.4	4225.3	4313.3	4526.1	4878.8	5242.6	5642.2	6072.4
Non-Highway										
Air 3/	3253.6	3346.6	3453.4	3562.0	3669.7	4026.7	4707.7	5435.9	6315.9	7338.3
General Aviation	195.3	199.6	204.7	209.8	214.9	231.9	264.3	298.9	339.4	385.4
Domestic Air Carriers	1864.5	1900.2	1943.1	1986.2	2026.2	2157.8	2390.9	2610.0	2870.6	3157.1
International Air Carriers	699.7	714.6	732.3	750.2	767.3	822.4	922.4	1012.2	1123.0	1245.9
Freight Carriers	494.2	532.2	573.4	615.9	661.2	814.6	1130.2	1514.7	2065.4	2816.4
Water 4/	1416.3	1418.9	1422.5	1426.3	1430.3	1444.6	1471.7	1496.1	1522.5	1549.4
Freight	1094.3	1094.0	1094.5	1094.9	1095.9	1100.7	1111.0	1119.6	1129.2	1138.9
Domestic Shipping	296.5	294.7	293.6	292.6	292.1	292.5	295.6	297.5	300.0	302.5
International Shipping	797.8	799.3	800.9	802.3	803.8	808.2	815.4	822.2	829.3	836.4
Recreational Boats	322.0	324.9	328.1	331.3	334.4	344.0	360.7	376.5	393.9	412.1
Rail	616.6	619.7	625.6	633.3	641.2	649.2	667.1	688.9	709.7	731.1
Freight	531.2	532.6	536.8	542.8	549.1	551.9	561.8	575.6	587.8	600.2
Passenger	85.4	87.1	88.8	90.5	92.1	97.2	105.2	113.4	122.4	132.2
Intercity	22.3	22.7	23.2	23.6	24.1	25.4	27.5	29.6	32.0	34.5
Transit	47.7	48.6	49.6	50.5	51.5	54.3	58.8	63.3	68.4	73.8
Commuter	15.4	15.7	16.0	16.3	16.6	17.5	19.0	20.4	22.1	23.8
Lubricants	247.6	249.9	252.7	255.9	258.3	264.4	286.9	311.2	337.7	366.3
Pipeline Fuel Natural Gas	730.8	754.4	771.1	793.3	810.4	897.5	994.2	1090.5	1202.0	1325.0
Military Use	603.2	605.1	612.4	622.5	632.3	661.1	703.0	744.8	790.5	839.1
Aviation	488.9	490.4	496.3	504.5	512.5	535.8	569.7	603.6	640.7	680.0
Residual Fuel Use	18.1	18.1	18.3	18.6	18.9	19.8	21.0	22.3	23.7	25.1
Distillate Fuel Use	96.3	96.6	97.8	99.4	100.9	105.5	112.2	118.9	126.2	133.9
Total	28808.5	29379.1	29983.6	30609.1	31185.9	32860.1	35565.2	38194.3	41177.8	44394.3
Energy Use by Type										
Motor Gasoline	16934.3	17205.8	17483.7	17772.6	18041.1	18805.1	19968.4	21026.1	22233.2	23509.5
Distillate (diesel)	5978.0	6116.0	6279.2	6451.6	6607.9	6995.3	7614.0	8226.5	8921.2	9674.5
Jet Fuel (kerosene and naphtha)	3700.1	3794.8	3907.5	4024.3	4140.0	4520.3	5235.3	5997.4	6908.2	7957.2
Residual Oil	848.7	849.7	851.0	852.4	853.9	859.0	867.9	876.0	884.6	893.4
Aviation Gasoline	42.3	42.3	42.3	42.2	42.2	42.1	42.1	42.1	42.0	42.0
Liquefied Petroleum Gas	75.2	81.9	85.7	88.2	89.7	92.2	99.6	108.8	118.3	128.5
Lubricants	247.6	249.9	252.7	255.9	258.3	264.4	286.9	311.2	337.7	366.3
Petroleum Subtotal	27826.4	28340.3	28902.1	29487.2	30033.2	31578.5	34114.2	36588.3	39383.7	42392.8
Methanol	17.7	20.4	22.3	23.0	23.2	23.0	23.5	24.5	25.4	26.2
Ethanol	55.5	63.8	69.9	73.6	75.8	79.6	86.6	93.4	101.3	109.7
Electricity	72.9	81.0	88.3	94.9	100.6	118.1	145.5	165.9	196.6	233.0
Compressed Natural Gas	105.1	119.2	129.8	137.1	142.9	163.5	201.2	231.7	275.8	328.3
Liquid Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipeline Fuel Natural Gas	730.8	754.4	771.1	793.3	810.4	897.5	994.2	1090.5	1202.0	1325.0
Total Consumption	28808.5	29379.1	29983.6	30609.1	31185.9	32860.1	35565.2	38194.3	41177.8	44394.3

1/ Commercial light trucks from 8,500 to 10,000 pounds.

2/ Does not include commercial bus and military use.

3/ Does not include military jet fuel use.

4/ Does not include military residual oil.

Btu = British thermal unit.

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

Sources: 1999 values derived using: Energy Information Administration (EIA), Short-Term Energy Outlook, September 2000,

<http://www.eia.doe.gov/pub/forecasting/steo/oldsteos/sep00.pdf>; EIA, Fuel Oil and Kerosene Sales 1998, DOE/EIA-0535(98) (Washington, DC, August 1999);

EIA, State Energy Data Report 1997, DOE/EIA-0214(97) (Washington, DC, September 1999); Oak Ridge National Laboratory, Transportation Energy Data Book:

17, 18, and 19 (Oak Ridge, TN, September 1999); Department of Defense, Defense Fuel Supply Center; and EIA, AEO2001 National Energy Modeling System run

AEO2001.D101600A. Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

**Table 34. Transportation Sector Energy Use by Fuel Type Within a Mode
(Trillion Btu per Year)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Mode and Type										
Light-Duty Vehicle										
Motor Gasoline	15692.45	15967.19	16242.15	16527.49	16790.93	17534.75	18649.44	19643.54	20791.22	22005.95
Methanol	17.74	20.42	22.26	23.05	23.16	22.97	23.53	24.54	25.36	26.21
Ethanol	55.54	63.85	69.88	73.57	75.77	79.55	86.56	93.44	101.26	109.74
Compressed Natural Gas	101.41	113.83	122.03	126.22	128.39	133.62	145.76	157.44	170.90	185.51
Liquefied Petroleum Gas	59.13	65.09	68.79	70.44	70.91	71.28	75.59	81.28	86.79	92.68
Electricity	10.51	17.35	23.45	28.74	33.21	47.04	68.60	83.03	110.32	146.57
Liquid Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.02
Distillate (diesel)	338.19	379.00	419.70	462.52	506.25	624.36	782.95	897.30	1075.70	1289.57
Total	16274.96	16626.73	16968.27	17312.01	17628.63	18513.57	19832.43	20980.59	22334.77	23776.36
Commercial Light Trucks Gasoline 1/	651.07	659.92	671.52	684.17	695.63	726.07	776.10	827.68	883.69	943.50
Freight Trucks 2/										
Motor Gasoline	259.93	244.87	233.01	220.58	211.13	191.29	173.14	169.56	159.64	150.30
Distillate (diesel)	4547.86	4643.19	4759.81	4881.40	4985.55	5244.68	5684.46	6160.73	6677.11	7236.77
Compressed Natural Gas	3.67	5.37	7.79	10.89	14.53	29.87	55.47	74.22	117.00	184.44
Liquefied Petroleum Gas	16.09	16.81	16.91	17.71	18.76	20.87	23.97	27.54	31.64	36.35
Total	4827.55	4910.24	5017.52	5130.58	5229.97	5486.71	5937.03	6432.05	6964.15	7540.27
Freight Rail 3/										
Distillate (diesel)	531.24	532.63	536.85	542.81	549.05	551.95	561.84	575.58	587.77	600.22
Total	531.24	532.63	536.85	542.81	549.05	551.95	561.84	575.58	587.77	600.22
Domestic Shipping										
Distillate (diesel)	210.75	209.47	208.70	208.01	207.64	207.91	210.09	211.44	213.23	215.03
Residual Oil	85.74	85.22	84.90	84.63	84.48	84.59	85.47	86.02	86.75	87.48
Motor Gasoline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	296.49	294.69	293.60	292.64	292.12	292.50	295.56	297.46	299.97	302.51
International Shipping										
Distillate (diesel)	52.85	52.95	53.05	53.15	53.25	53.54	54.02	54.47	54.93	55.41
Residual Oil	744.93	746.36	747.80	749.15	750.52	754.65	761.40	767.71	774.32	780.99
Total	797.78	799.31	800.85	802.30	803.76	808.19	815.42	822.17	829.25	836.40
Air Transportation										
Jet Fuel	3211.29	3304.34	3411.18	3519.82	3627.54	3984.56	4665.63	5393.82	6275.60	7301.52
Aviation Gasoline	42.35	42.30	42.26	42.23	42.20	42.14	42.10	42.08	42.05	42.01
Total	3253.63	3346.64	3453.44	3562.04	3669.74	4026.70	4707.72	5435.90	6315.87	7338.28
Miscellaneous Transportation										
Military Use										
Jet Fuel	488.86	490.41	496.31	504.52	512.46	535.78	569.70	603.61	640.67	680.01
Residual Fuel	18.06	18.12	18.33	18.64	18.93	19.79	21.04	22.30	23.67	25.12
Distillate	96.29	96.60	97.76	99.38	100.94	105.53	112.21	118.89	126.19	133.94
Total	603.21	605.12	612.40	622.53	632.33	661.11	702.95	744.79	790.53	839.07
Bus Transportation										
Transit Bus (motor gasoline)	4.88	4.90	4.92	4.94	4.95	4.97	4.94	4.87	4.82	4.78
Transit Bus (diesel)	84.44	84.85	85.20	85.45	85.67	86.02	85.49	84.33	83.50	82.67
Intercity Bus (diesel)	23.98	24.10	24.20	24.27	24.33	24.43	24.28	23.95	23.71	23.48
School Bus (motor gasoline)	4.01	4.03	4.05	4.06	4.07	4.09	4.06	4.01	3.97	3.93
School Bus (diesel)	69.44	69.78	70.06	70.28	70.46	70.74	70.31	69.35	68.67	67.99
Total	186.75	187.65	188.42	188.99	189.48	190.24	189.08	186.50	184.66	182.84
Rail Transportation										
Intercity Rail (electricity)	8.70	8.87	9.05	9.22	9.39	9.91	10.72	11.55	12.47	13.47
Intercity Rail (diesel)	13.59	13.86	14.14	14.41	14.67	15.48	16.75	18.05	19.49	21.04
Transit Rail (electricity)	47.69	48.64	49.60	50.54	51.47	54.31	58.77	63.31	68.37	73.82
Commuter Rail (electricity)	6.01	6.13	6.25	6.37	6.49	6.84	7.41	7.98	8.61	9.30
Commuter Rail (diesel)	9.39	9.57	9.76	9.95	10.13	10.69	11.57	12.46	13.46	14.53
Total	85.38	87.08	88.79	90.48	92.14	97.23	105.23	113.36	122.40	132.16
Recreation Boats										
Lubricants	322.00	324.86	328.08	331.33	334.39	343.95	360.73	376.48	393.89	412.09
Pipeline Fuel Natural Gas	247.60	249.86	252.71	255.94	258.30	264.38	286.89	311.21	337.65	366.34

**Table 34. Transportation Sector Energy Use by Fuel Type Within a Mode
(Trillion Btu per Year)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Total Miscellaneous	2175.78	2208.96	2241.54	2282.57	2317.01	2454.44	2639.09	2822.85	3027.31	3246.57
Total Consumption	28808.50	29379.13	29983.59	30609.13	31185.93	32860.13	35565.20	38194.29	41177.78	44394.33

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

2/ Does not include military distillate. Does not include commercial buses.

3/ Does not include passenger rail.

Btu = British thermal unit.

N/A = Not applicable.

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

Sources: 1999 compressed natural gas volumes: Energy Information Administration (EIA), AEO2001 National Energy Modeling System run AEO2001.D101600A. Other 1999 values derived using: EIA, Short-Term Energy Outlook, September 2000, <http://www.eia.doe.gov/pub/forecasting/steo/oldsteos/sep00.pdf>; EIA, Fuel Oil and Kerosene Sales 1998, DOE/EIA-0535(98) (Washington, DC, August 1999); EIA, State Energy Data Report 1997, DOE/EIA-0214(97) (Washington, DC, September 1999); Oak Ridge National Laboratory, Transportation Energy Data Book: 17, 18 and 19 (Oak Ridge, TN, September 1999); Department of Defense, Defense Fuel Supply Center; and EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.
Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 35. Light-Duty Vehicle Energy Consumption by Technology Type and Fuel Type (Trillion Btu)

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Technology Type										
Light-Duty Consumption by Technology Type										
Conventional Vehicles 1/										
Gasoline ICE Vehicles	15393.01	15604.67	15815.34	16032.93	16227.64	16763.99	17551.63	18270.22	19073.36	19911.79
TDI Diesel ICE	338.19	379.00	419.70	462.52	506.25	624.36	782.95	897.30	1075.70	1289.57
Alternative-Fuel Vehicles										
Alcohol Fuel Technology										
Methanol-Flex Fuel ICE	19.20	22.37	25.02	26.97	28.49	32.63	38.97	43.63	50.45	58.34
Methanol ICE	0.27	0.28	0.29	0.30	0.31	0.34	0.37	0.38	0.41	0.43
Ethanol-Flex Fuel ICE	293.16	333.99	373.05	409.44	443.11	536.33	667.39	770.59	923.68	1107.18
Ethanol ICE	0.15	0.16	0.17	0.18	0.19	0.22	0.26	0.30	0.34	0.39
Total Alcohol	312.77	356.80	398.53	436.90	472.10	569.53	706.99	814.91	974.77	1166.01
Natural Gas Technology										
CNG ICE	8.21	8.95	9.69	10.41	11.11	12.99	15.41	17.37	20.09	23.24
CNG Bi-fuel	102.29	116.97	128.89	138.20	146.07	167.48	199.27	223.85	258.79	299.19
LPG ICE	6.37	6.99	7.57	8.13	8.66	10.15	12.46	15.22	18.63	22.81
LPG Bi-fuel	65.93	72.75	78.20	82.31	85.64	94.66	108.50	118.69	132.90	148.82
Total Natural Gas Technology	182.81	205.67	224.34	239.05	251.48	285.27	335.64	375.13	430.17	493.28
Electric Technology										
Electric Vehicle	10.51	17.35	23.45	28.74	33.21	47.04	68.60	83.03	110.32	146.57
Electric-Diesel Hybrid	4.78	8.75	12.51	16.69	21.24	36.20	68.31	99.05	163.84	271.01
Electric-Gasoline Hybrid	42.52	72.63	100.71	130.07	160.58	260.19	446.76	619.65	956.25	1475.71
Total Electricity	57.80	98.73	136.66	175.50	215.03	343.43	583.67	801.73	1224.97	1871.64
Fuel Cell Technology										
Fuel Cell Gasoline	0.00	0.00	0.00	0.00	0.00	0.00	0.10	5.01	5.01	5.01
Fuel Cell Methanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03
Fuel Cell Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.02
Total Fuel Cell	0.00	0.00	0.00	0.00	0.00	0.00	0.11	5.06	5.06	5.06
Light-Duty Consumption by Fuel Type1/										
Motor Gasoline	15692.45	15967.19	16242.15	16527.49	16790.93	17534.75	18649.44	19643.54	20791.22	22005.95
Distillate (diesel)	338.19	379.00	419.70	462.52	506.25	624.36	782.95	897.30	1075.70	1289.57
Methanol	17.74	20.42	22.26	23.05	23.16	22.97	23.53	24.54	25.36	26.21
Ethanol	55.54	63.85	69.88	73.57	75.77	79.55	86.56	93.44	101.26	109.74
Compressed Natural Gas	101.41	113.83	122.03	126.22	128.39	133.62	145.76	157.44	170.90	185.51
Liquefied Petroleum Gas	59.13	65.09	68.79	70.44	70.91	71.28	75.59	81.28	86.79	92.68
Electricity	10.51	17.35	23.45	28.74	33.21	47.04	68.60	83.03	110.32	146.57
Liquid Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.02

1/ Includes personal vehicles and fleet vehicles. Includes both cars and trucks.

Btu = British thermal unit.

ICE = Internal combustion engine.

N/A = Not applicable.

Source: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

**Table 45. Light-Duty Vehicle Sales by Technology Type (Thousands)
United States Total**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
New Car Sales 1/										
Conventional Vehicles										
Gasoline ICE Vehicles	7333.4	7196.9	7167.9	7011.1	6849.9	6639.4	7010.7	7045.5	7257.7	7476.4
TDI Diesel ICE	182.0	176.4	175.2	179.5	182.5	171.9	183.4	199.8	215.4	232.2
Total Conventional	7515.4	7373.4	7343.1	7190.6	7032.4	6811.4	7194.0	7245.3	7472.5	7706.9
Alternative-Fuel Vehicles										
Methanol-Flex Fuel ICE	9.9	9.7	9.6	9.4	9.2	9.0	9.6	9.7	10.1	10.5
Methanol ICE	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Ethanol-Flex Fuel ICE	25.1	24.7	24.3	23.9	23.4	22.8	24.3	24.5	25.4	26.4
Ethanol ICE	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Electric Vehicle	100.1	98.3	97.2	96.5	95.5	95.7	102.2	105.4	110.6	116.1
Electric-Diesel Hybrid	71.2	70.3	61.8	66.1	69.4	76.5	110.2	102.4	118.5	137.0
Electric-Gasoline Hybrid	399.1	399.5	344.7	349.4	354.0	381.1	469.2	481.9	541.9	609.3
CNG ICE	5.0	5.0	5.0	5.0	4.9	4.7	4.8	4.8	4.9	4.9
CNG Bi-fuel	73.1	71.8	70.9	69.7	68.3	66.6	71.1	71.9	74.7	77.6
LPG ICE	2.6	2.5	2.4	2.4	2.3	2.3	2.6	3.0	3.4	3.9
LPG Bi-fuel	39.1	38.4	37.9	37.3	36.5	35.6	38.1	38.6	40.1	41.7
Fuel Cell Gasoline	0.0	0.0	0.0	0.0	0.0	0.0	0.9	24.2	24.2	24.2
Fuel Cell Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Fuel Cell Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Alternatives	725.4	720.7	654.3	659.8	663.9	694.6	833.4	866.8	968.3	1081.7
Percent Alternative Car Sales	8.80	8.90	8.18	8.41	8.63	9.25	10.38	10.69	11.48	12.34
Total New Car Sales	8240.8	8094.0	7997.4	7850.4	7696.3	7505.9	8027.5	8112.1	8433.3	8767.2
New Light Truck Sales 2/										
Conventional Vehicles										
Gasoline ICE Vehicles	6006.9	5991.2	6009.4	5938.5	5851.9	5837.9	6322.8	6416.5	6727.0	7052.6
TDI Diesel ICE	532.5	527.1	530.5	551.9	568.4	535.9	545.0	544.5	548.9	553.4
Total Conventional	6539.5	6518.3	6540.0	6490.4	6420.3	6373.7	6867.8	6961.1	7274.7	7602.6
Alternative-Fuel Vehicles										
Methanol-Flex Fuel ICE	15.5	15.5	15.5	15.4	15.3	15.3	16.7	17.0	17.9	18.9
Methanol ICE	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Ethanol-Flex Fuel ICE	427.6	430.3	431.5	426.1	419.1	421.0	474.3	488.1	525.5	565.9
Ethanol ICE	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Electric Vehicle	22.2	22.5	22.8	22.0	21.1	19.2	22.1	20.7	21.5	22.3
Electric-Diesel Hybrid	19.1	21.0	21.5	24.6	27.3	32.2	48.5	47.3	57.3	69.4
Electric-Gasoline Hybrid	213.5	222.4	216.5	224.0	231.7	258.8	339.9	363.4	430.6	510.3
CNG ICE	6.9	7.4	7.7	8.0	8.2	8.1	8.8	9.4	10.1	10.9
CNG Bi-fuel	60.1	60.6	60.9	60.9	60.7	60.7	68.0	74.5	82.6	91.6
LPG ICE	7.4	7.1	6.9	6.8	6.8	7.1	8.8	11.9	15.4	19.9
LPG Bi-fuel	32.6	32.6	32.7	32.6	32.3	32.3	35.4	36.4	38.7	41.1
Fuel Cell Gasoline	0.0	0.0	0.0	0.0	0.0	0.0	0.4	17.3	17.3	17.3
Fuel Cell Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Fuel Cell Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Alternatives	805.1	819.7	816.4	820.5	822.8	854.9	1023.2	1086.5	1224.8	1380.7
Percent Alternative Light Truck Sales	10.96	11.17	11.10	11.22	11.36	11.83	12.97	13.50	14.42	15.41
Total New Truck Sales	7344.6	7338.0	7356.4	7311.0	7243.1	7228.6	7891.0	8047.5	8491.2	8959.2
Percent Total Alternative Sales	9.82	9.98	9.58	9.76	9.95	10.52	11.66	12.09	12.96	13.89
EPACT Legislative Alternative Sales	264.15	261.62	260.36	257.14	253.42	250.04	270.21	274.35	287.37	301.02
ZEVP Legislative Alternative Sales	292.38	289.27	287.60	283.82	279.53	275.38	297.21	301.58	315.60	330.27
Total Vehicles Sales	15585.3	15432.0	15353.8	15161.4	14939.5	14734.5	15918.4	16159.6	16923.0	17722.5

1/ Includes personal and fleet light-duty cars.

2/ Includes personal and fleet light-duty trucks.

ICE = Internal combustion engine.

EPACT = Energy Policy Act of 1992.

ZEVP = Zero emission vehicles from the low emission vehicle program.

N/A = Not applicable.

Sources: 1999 derived using: California Air Resources Board (CARB), "Proposed Regulations for Low-Emission Vehicles and Clean Fuels, Staff Report";

**Table 45. Light-Duty Vehicle Sales by Technology Type (Thousands)
United States Total**

CARB, "Proposed Amendments to California Exhaust and Evaporative Emission Standards and Test Procedures for Passenger, Light-Duty Trucks and Medium-Duty Vehicles - LEVII and Proposed Amendments to California Motor Vehicle Certification: Assembly-Line and In-Use Test Requirements - CAP 2000," (El Monte, CA, September 1998); Energy Information Administration (EIA), Describing Current and Potential Markets for Alternative-Fuel Vehicles, DOE/EIA-0604(96) (Washington, DC, March 1996); EIA, Alternatives to Traditional Transportation Fuels 1998, http://www.eia.doe.gov/cneaf/alt_trans98/table1.html; and EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.
Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 46. Light-Duty Vehicle Stock by Technology Type (Millions)

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Light-Duty Car Stock 1/										
Conventional Vehicles										
Gasoline ICE Vehicles	115.96	114.45	113.03	111.58	110.07	105.67	100.75	98.79	95.52	92.36
TDI Diesel ICE	1.37	1.49	1.61	1.74	1.86	2.16	2.45	2.61	2.88	3.16
Total Conventional	117.33	115.94	114.65	113.31	111.93	107.83	103.20	101.40	98.34	95.36
Alternative-Fuel Vehicles										
Alcohol Fuel Technology										
Methanol-Flex Fuel ICE	0.05	0.06	0.07	0.08	0.09	0.10	0.12	0.13	0.15	0.17
Methanol ICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethanol-Flex Fuel ICE	0.14	0.16	0.18	0.20	0.22	0.27	0.32	0.34	0.38	0.43
Ethanol ICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Technology										
CNG ICE	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07
CNG Bi-fuel	0.39	0.46	0.52	0.58	0.63	0.77	0.92	0.98	1.11	1.25
LPG ICE	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04
LPG Bi-fuel	0.24	0.27	0.30	0.33	0.36	0.42	0.49	0.52	0.58	0.64
Electric Technology										
Electric Vehicle	0.11	0.21	0.31	0.40	0.49	0.75	1.13	1.36	1.82	2.44
Electric-Diesel Hybrid	0.09	0.16	0.22	0.28	0.35	0.55	0.94	1.25	1.90	2.87
Electric-Gasoline Hybrid	0.59	0.99	1.32	1.66	2.00	3.00	4.64	5.85	8.15	11.38
Fuel Cell Technology										
Fuel Cell Gasoline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.06
Fuel Cell Methanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Alternatives	1.70	2.39	3.01	3.63	4.23	5.97	8.66	10.59	14.11	18.80
Total Car Stock	119.03	118.34	117.66	116.94	116.16	113.80	111.86	112.00	111.11	110.23
Light-Duty Truck Stock 1/										
Conventional Vehicles										
Gasoline ICE Vehicles	78.67	81.33	83.85	86.13	88.16	93.24	100.51	106.59	113.96	121.84
TDI Diesel ICE	4.26	4.70	5.12	5.55	5.97	7.01	8.27	9.10	10.37	11.81
Total Conventional	82.93	86.03	88.97	91.68	94.14	100.25	108.78	115.69	124.27	133.49
Alternative-Fuel Vehicles										
Alcohol Fuel Technology										
Methanol-Flex Fuel ICE	0.07	0.09	0.10	0.12	0.13	0.17	0.22	0.26	0.32	0.39
Methanol ICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethanol-Flex Fuel ICE	3.10	3.49	3.86	4.21	4.54	5.38	6.56	7.50	8.86	10.46
Ethanol ICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Technology										
CNG ICE	0.06	0.07	0.07	0.08	0.08	0.10	0.12	0.14	0.17	0.20
CNG Bi-fuel	0.33	0.38	0.44	0.49	0.54	0.68	0.88	1.05	1.30	1.61
LPG ICE	0.06	0.07	0.07	0.08	0.08	0.10	0.12	0.14	0.17	0.21
LPG Bi-fuel	0.26	0.28	0.31	0.33	0.35	0.41	0.49	0.56	0.65	0.76
Electric Technology										
Electric Vehicle	0.03	0.05	0.08	0.10	0.12	0.17	0.25	0.31	0.41	0.56
Electric-Diesel Hybrid	0.03	0.05	0.07	0.09	0.12	0.21	0.39	0.57	0.94	1.56
Electric-Gasoline Hybrid	0.31	0.54	0.75	0.97	1.20	1.90	3.18	4.38	6.67	10.14
Fuel Cell Technology										
Fuel Cell Gasoline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04
Fuel Cell Methanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Alternatives	4.26	5.02	5.75	6.47	7.16	9.11	12.21	14.95	19.14	24.51
Total Truck Stock	87.19	91.04	94.72	98.15	101.30	109.37	120.99	130.63	142.77	156.03
Total Vehicle Stock	206.22	209.38	212.38	215.09	217.46	223.16	232.85	242.63	252.99	263.79

1/ Includes personal and fleet vehicles.

ICE = Internal combustion engine.

N/A = Not applicable.

Sources: 1999 derived using: Energy Information Administration (EIA), Household Vehicles Energy Consumption 1994, DOE/EIA-0464(94) (Washington, DC, August 1997); EIA, Describing Current and Potential Markets for Alternative-Fuel Vehicles, DOE/EIA-0604(96) (Washington, DC, March 1996); EIA, Alternatives to Traditional Transportation Fuels 1998, http://www.eia.doe.gov/cneaf/alt_trans98/table1.html; Federal Highway Administration, Highway Statistics 1998 (Washington, DC, November 1999); Oak Ridge National Laboratory, Transportation Energy Data Book: 19 (Oak Ridge, TN, September 1999); and EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A. Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A. 1994, DOE/EIA-0464(94) (Washington, D.C., August 1997); EIA, Describing Current and Potential Markets for Alternative-Fuel Vehicles, DOE/EIA-0604(96) (Washington, DC, March 1996); EIA, Alternatives to Traditional

"Automobiles in Operation and Vehicle Travel by Age in 1996" and "Trucking Operation and Vehicle Travel by Age in 1995", US Department of Energy, ORNL-6941, (Oak Ridge, TN., September 1998); and EIA, AEO2000 National Energy Modeling System run AEO2K.D100199A. Projections: EIA, AEO2000 National Energy Modeling System run AEO2K.D100199A.

Table 47. Light-Duty Vehicle MPG by Technology Type (MPG Gasoline Equivalents)

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Automobiles 1/										
Conventional Vehicles										
Gasoline ICE Vehicles	30.08	30.12	30.22	30.45	30.73	31.59	31.58	31.63	31.64	31.66
TDI Diesel ICE	40.59	40.54	40.67	40.90	41.19	42.10	42.17	42.29	42.39	42.48
Alternative-Fuel Vehicles										
Alcohol Fuel Technology										
Methanol-Flex Fuel ICE	29.02	29.03	29.16	29.37	29.66	30.55	30.63	30.70	30.77	30.84
Methanol ICE	31.10	31.11	31.25	31.50	31.78	32.63	32.64	32.66	32.67	32.68
Ethanol-Flex Fuel ICE	28.85	28.86	28.99	29.20	29.49	30.37	30.44	30.51	30.58	30.65
Ethanol ICE	29.93	29.94	30.07	30.33	30.60	31.43	31.45	31.48	31.50	31.52
Natural Gas Technology										
CNG ICE	30.78	30.68	30.89	31.04	31.27	32.11	32.60	32.62	32.88	33.15
CNG Bi-fuel	28.75	28.67	28.86	29.00	29.22	30.06	30.52	30.54	30.79	31.03
LPG ICE	30.60	30.56	30.78	30.96	31.21	32.07	32.46	32.41	32.57	32.75
LPG Bi-fuel	28.69	28.61	28.81	28.95	29.17	30.03	30.47	30.50	30.74	30.98
Electric Technology										
Electric Vehicle	30.19	32.88	36.40	40.83	46.61	46.33	46.06	45.89	45.67	45.45
Electric-Diesel Hybrid	44.67	44.14	43.90	43.82	43.81	43.69	43.00	42.65	42.15	41.64
Electric-Gasoline Hybrid	41.89	41.38	41.11	40.96	40.91	40.78	40.01	39.66	39.11	38.57
Fuel Cell Technology										
Fuel Cell Gasoline	0.00	0.00	44.84	44.57	44.33	43.88	44.01	44.87	45.38	45.89
Fuel Cell Methanol	0.00	0.00	47.82	47.51	47.23	46.64	46.06	45.76	45.32	44.89
Fuel Cell Hydrogen	0.00	0.00	52.22	51.85	51.52	50.80	50.33	50.06	49.70	49.33
Average New Car Miles per Gallon	30.74	30.80	30.86	31.14	31.47	32.34	32.40	32.46	32.53	32.59
Light-Duty Trucks 1/										
Conventional Vehicles										
Gasoline ICE Vehicles	21.61	21.50	21.54	21.64	21.80	22.47	23.22	23.92	24.68	25.46
TDI Diesel ICE	29.40	29.18	29.20	29.25	29.38	30.19	30.99	31.77	32.58	33.42
Alternative-Fuel Vehicles										
Alcohol Fuel Technology										
Methanol-Flex Fuel ICE	21.52	21.44	21.47	21.60	21.78	22.50	23.26	23.98	24.76	25.56
Methanol ICE	24.48	24.33	24.35	24.43	24.58	25.22	25.90	26.47	27.11	27.78
Ethanol-Flex Fuel ICE	22.00	21.85	21.86	21.95	22.11	22.77	23.49	24.12	24.83	25.56
Ethanol ICE	23.89	23.72	23.73	23.78	23.90	24.49	25.16	25.68	26.30	26.93
Natural Gas Technology										
CNG ICE	23.18	23.06	23.10	23.21	23.38	23.98	24.51	25.17	25.79	26.43
CNG Bi-fuel	21.00	20.91	20.95	21.07	21.23	21.85	22.43	23.11	23.77	24.45
LPG ICE	23.60	23.39	23.36	23.40	23.52	24.06	24.59	25.28	25.90	26.55
LPG Bi-fuel	21.14	21.06	21.09	21.22	21.39	22.01	22.61	23.35	24.06	24.78
Electric Technology										
Electric Vehicle	25.80	28.03	30.98	34.60	39.33	38.26	37.21	36.63	35.84	35.06
Electric-Diesel Hybrid	35.22	34.70	34.46	34.28	34.18	34.00	33.41	33.09	32.64	32.20
Electric-Gasoline Hybrid	32.75	32.24	32.00	31.84	31.74	31.58	30.92	30.70	30.27	29.84
Fuel Cell Technology										
Fuel Cell Gasoline	0.00	0.00	38.77	38.40	38.05	36.75	34.88	33.55	32.05	30.63
Fuel Cell Methanol	0.00	0.00	41.38	40.97	40.59	39.10	37.02	35.63	34.01	32.46
Fuel Cell Hydrogen	0.00	0.00	45.25	44.74	44.26	42.35	40.80	40.02	38.91	37.82
Average New Truck Miles per Gallon	22.32	22.20	22.23	22.37	22.56	23.22	23.98	24.66	25.41	26.19
Fleet Average Stock Car Miles per Gallon 2/	24.24	24.44	24.65	24.83	25.01	25.57	26.36	26.82	27.46	28.12
Fleet Average Stock Truck Miles per Gallon 2/	17.13	17.20	17.27	17.33	17.39	17.61	17.96	18.35	18.74	19.13
Fleet Average Stock Vehicle Miles per Gallon :	20.62	20.66	20.71	20.74	20.77	20.93	21.21	21.48	21.76	22.05

1/ Fuel efficiencies are EPA rated. Includes personal and fleet vehicles.

2/ Stock values are on-road efficiencies. Includes personal vehicles, fleet vehicles, and freight light trucks.

ICE = Internal combustion engine.

Sources: 1999 derived using: Energy and Environmental Analysis Inc., Updates to the Fuel Economy Model, prepared for Energy Information Administration (EIA) (Washington, DC, June 1998); National Highway Traffic and Safety Administration, Mid-Model Year Fuel Economy Reports from Auto Manufacturers, 2000; Federal Highway Administration, Highway Statistics 1998 (Washington, DC, November 1999); United States Department of Commerce, Bureau of the Census, "Vehicle Inventory and Use Survey," EC97TV (Washington, DC, October 1999); and EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A. Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

**Table 48. Light-Duty Vehicle VMT by Technology Type
(Billion Miles, Unless Otherwise Noted)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Conventional Vehicles 1/										
Gasoline ICE Vehicles	2490.3	2527.5	2566.6	2603.7	2636.9	2738.6	2893.2	3043.2	3208.01	3381.70
TDI Diesel ICE	65.2	72.5	80.0	87.7	95.5	116.7	143.2	161.8	190.57	224.39
Alternative-Fuel Vehicles										
Alcohol Fuel Technology										
Methanol-Flex Fuel ICE	2.9	3.4	3.8	4.1	4.4	5.1	6.2	7.0	8.2	9.6
Methanol ICE	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Ethanol-Flex Fuel ICE	40.7	46.5	52.1	57.3	62.1	75.8	95.6	112.2	136.5	166.0
Ethanol ICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Natural Gas Technology										
CNG ICE	1.4	1.5	1.6	1.7	1.8	2.2	2.6	2.9	3.4	3.9
CNG Bi-fuel	16.2	18.6	20.5	22.0	23.3	26.8	32.2	36.3	42.1	49.0
LPG ICE	1.0	1.1	1.2	1.3	1.4	1.6	2.0	2.5	3.0	3.8
LPG Bi-fuel	10.2	11.4	12.3	13.0	13.6	15.2	17.6	19.4	22.0	24.9
Electric Technology										
Electric Vehicle	2.0	3.4	4.9	6.3	7.8	12.1	18.8	23.3	32.4	45.0
Electric-Diesel Hybrid	1.3	2.4	3.4	4.5	5.7	9.6	17.7	25.2	40.7	66.0
Electric-Gasoline Hybrid	10.5	17.8	24.6	31.7	38.9	62.4	104.4	141.3	212.8	320.3
Fuel Cell Technology										
Fuel Cell Gasoline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3
Fuel Cell Methanol	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Hydrogen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Miles Traveled Equation Components										
Total VMT (billion miles)	2641.8	2706.2	2771.1	2833.4	2891.4	3066.2	3333.6	3576.5	3862.7	4171.8
VMT/Driving Population (thousand miles)	12.3	12.4	12.6	12.7	12.8	13.2	13.8	14.3	14.9	15.5
Driving Population (million)	220.0	222.4	224.8	227.3	229.7	236.6	246.7	256.5	267.1	278.1
Price Effects										
Motor Gasoline Price (1987 dollars per mmBtu)	7.87	7.89	7.90	8.02	8.19	8.13	7.98	7.93	7.83	7.73
Fleet Miles per Gallon	20.73	20.75	20.78	20.81	20.85	21.01	21.27	21.56	21.85	22.13
Real Cost of Driving per Mile (1987 cents)	6.124	6.130	6.128	6.214	6.332	6.240	6.048	5.928	5.78	5.63
Point Price Elasticity	-0.044	-0.043	-0.043	-0.043	-0.044	-0.042	-0.039	-0.037	-0.03	-0.03
Income Effects										
Disposable Income (billion 1987 dollars)	6238.4	6413.2	6613.8	6821.0	7019.8	7666.3	8896.7	10168.1	11710.3	13486.3
Point Income Elasticity	0.342	0.344	0.348	0.352	0.356	0.369	0.394	0.416	0.442	0.469
Demographic Driving Population Effect										
Percentage Female Driving Population	0.774	0.780	0.785	0.789	0.791	0.796	0.796	0.796	0.796	0.796
Point Demographic Elasticity	0.418	0.416	0.414	0.412	0.410	0.401	0.384	0.369	0.354	0.340

1/ Includes personal and fleet vehicles. Includes both cars and light trucks.

VMT = Vehicle miles traveled.

ICE = Internal combustion engine.

MmBtu = Million British thermal units.

N/A = Not applicable.

Sources: 1999 derived using: Federal Highway Administration, Highway Statistics 1998 (Washington, DC, November 1999); Oak Ridge National Laboratory, Transportation Energy Data Book: 19 (Oak Ridge, TN, September 1999); United States Department of Commerce, Bureau of the Census, "Vehicle Inventory and Use Survey," EC97TV (Washington, DC, October 1999); and Energy Information Administration (EIA), AEO2001 National Energy Modeling System run AEO2001.D101600A. Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 49. Summary of New Light-Duty Vehicle Size Class Attributes

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Class Attributes										
Personal Vehicles										
EPA Rated New Vehicle Fuel Efficiency										
Conventional Cars (MPG)										
Minicompact	26.546	26.607	26.772	26.885	26.974	27.388	27.714	27.986	28.290	28.597
Subcompact	34.602	34.732	34.986	35.268	35.723	36.807	36.793	36.782	36.770	36.758
Compact	32.151	32.130	32.173	32.463	32.691	33.649	33.576	33.541	33.488	33.434
Midsized	29.205	29.279	29.388	29.604	29.876	30.607	30.630	30.785	30.875	30.964
Large	26.704	26.761	26.863	27.010	27.272	28.327	28.491	28.503	28.592	28.681
Two Seater	28.865	28.882	29.039	29.191	29.351	30.056	30.390	30.647	30.947	31.250
Average New Car	30.551	30.586	30.683	30.920	31.205	32.080	32.054	32.075	32.073	32.071
Average New Car On-Road MPG	25.924	25.924	26.005	26.181	26.390	27.029	26.804	26.649	26.461	26.274
Conventional Light Trucks										
Small Pickup	26.292	26.135	26.131	26.139	26.235	26.868	27.652	28.381	29.169	29.979
Large Pickup	19.381	19.291	19.341	19.458	19.593	20.146	20.823	21.491	22.197	22.926
Small Van	26.400	26.173	26.157	26.184	26.280	26.947	27.837	28.782	29.746	30.743
Large Van	19.373	19.349	19.420	19.624	19.856	20.641	21.352	22.086	22.845	23.631
Small Utility	22.911	22.808	22.786	22.822	22.943	23.586	24.399	25.031	25.787	26.565
Large Utility	17.757	17.711	17.780	17.961	18.186	18.946	19.659	20.251	20.937	21.646
Average New Light Truck	21.808	21.682	21.712	21.811	21.964	22.614	23.370	24.049	24.801	25.576
Average New Light Truck On-Road MPG	17.498	17.376	17.399	17.461	17.561	18.033	18.463	18.871	19.304	19.747
Degradation Factors 1/										
Cars	0.849	0.848	0.848	0.847	0.846	0.843	0.836	0.831	0.825	0.819
Light Trucks	0.802	0.801	0.801	0.801	0.800	0.797	0.790	0.785	0.778	0.772
New Fuel Efficiency by Size Class 2/										
Alternative-Fuel Cars										
Minicompact	34.86	34.46	34.36	34.38	34.44	34.73	34.74	35.44	35.80	36.17
Subcompact	46.410	45.892	45.572	45.430	45.366	45.300	44.522	44.519	44.133	43.751
Compact	44.644	44.122	43.764	43.580	43.490	43.289	42.409	42.027	41.410	40.803
Midsized	36.614	37.428	38.408	39.823	41.389	41.273	40.742	40.599	40.266	39.936
Large	37.043	36.611	36.301	36.195	36.181	36.246	35.662	35.585	35.259	34.936
Two Seater	38.565	38.120	37.954	37.949	37.998	38.296	38.176	38.806	39.063	39.322
Average New Alternative Cars	39.235	39.593	40.039	40.867	41.771	41.666	41.007	40.789	40.357	39.930
Alternative-Fuel Light Trucks										
Small Pickup	28.295	28.263	28.305	28.485	28.761	29.786	31.091	32.126	33.365	34.650
Large Pickup	20.097	20.064	20.145	20.347	20.588	21.394	22.540	23.419	24.502	25.635
Small Van	31.408	31.158	30.990	31.047	31.174	31.699	32.112	32.428	32.799	33.174
Large Van	22.434	22.421	22.409	22.651	22.952	23.830	24.522	25.206	25.924	26.662
Small Utility	25.845	25.848	25.868	26.060	26.315	26.818	27.431	27.828	28.347	28.876
Large Utility	19.223	19.196	19.216	19.428	19.693	20.496	21.212	21.637	22.231	22.842
Average New Alternative Light Trucks	25.055	24.959	24.930	25.136	25.405	26.039	26.650	27.069	27.600	28.140
Fleet Vehicles										
EPA Rated New Vehicle Fuel Efficiency										
Cars	28.717	28.780	28.896	29.097	29.369	30.204	30.286	30.390	30.483	30.577
Light Trucks	21.228	21.150	21.188	21.320	21.494	22.188	22.937	23.666	24.442	25.243
Average On-Road Miles per Gallon										
Cars	23.531	23.856	24.158	24.411	24.538	25.075	25.352	25.233	25.313	25.392
Light Trucks	16.516	16.692	16.847	16.925	16.999	17.309	17.894	18.361	18.911	19.477
New Vehicle Sales Shares (%)										
Conventional Cars										
Minicompact	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Subcompact	15.3	15.2	15.1	15.0	15.0	14.7	14.4	14.1	13.9	13.6
Compact	33.9	34.0	34.1	34.4	34.8	34.6	34.3	34.1	33.9	33.6
Midsized	36.3	36.2	36.1	35.9	35.5	35.6	36.0	36.0	36.2	36.5
Large	12.4	12.5	12.6	12.6	12.6	12.9	13.3	13.6	13.9	14.3
Two Seater	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Conventional Light Trucks										
Small Pickup	12.9	12.5	12.4	12.2	12.0	11.9	11.7	11.4	11.2	11.0
Large Pickup	19.7	19.3	19.0	18.8	18.5	18.0	17.1	16.4	15.7	15.0
Small Van	18.7	18.5	18.5	18.7	19.0	18.9	18.6	18.4	18.2	18.0

Table 49. Summary of New Light-Duty Vehicle Size Class Attributes

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Large Van	2.9	2.8	2.7	2.7	2.6	2.5	2.3	2.2	2.1	2.0
Small Utility	29.7	30.5	30.7	30.8	30.9	31.4	32.3	32.9	33.7	34.5
Large Utility	16.1	16.5	16.7	16.8	17.0	17.4	18.0	18.5	19.1	19.8
New Vehicle Average Horsepower										
Conventional Cars										
Minicompact	280.894	286.121	291.058	295.028	298.436	306.673	323.350	338.860	356.199	374.426
Subcompact	160.409	162.594	166.202	169.357	172.210	181.643	197.156	210.804	227.096	244.646
Compact	170.357	172.270	176.722	180.925	184.463	197.306	217.963	235.712	257.634	281.595
Midsize	197.726	200.460	204.763	208.745	212.185	223.321	241.208	256.799	275.375	295.295
Large	245.834	250.042	256.065	261.457	266.684	285.435	313.601	334.857	362.690	392.836
Two Seater	254.873	259.724	264.876	269.253	273.249	285.597	306.193	323.241	343.885	365.847
Average New Car	189.981	192.730	197.277	201.364	204.897	217.639	238.009	255.211	276.363	299.269
Conventional Light Trucks										
Small Pickup	170.971	173.166	176.452	179.662	182.868	194.547	212.316	227.189	245.509	265.307
Large Pickup	225.289	228.457	232.672	237.230	241.620	256.941	279.400	297.798	320.601	345.150
Small Van	183.824	186.609	190.154	193.612	197.096	209.893	229.665	246.194	266.635	288.773
Large Van	224.384	226.957	230.996	234.721	238.143	251.072	273.187	290.988	313.266	337.250
Small Utility	193.013	196.147	199.954	203.967	207.578	220.795	240.380	255.919	275.524	296.630
Large Utility	229.123	232.343	236.550	240.525	244.077	256.559	277.885	295.252	316.735	339.780
Average New Light Truck	201.536	204.572	208.399	212.271	215.918	229.095	249.301	265.786	286.280	308.354

1/ Conversion factor used to convert Environmental Protection Agency rated to "on road" miles per gallon.

2/ Environmental Protection Agency rated miles per gallon.

Sources: 1999 derived using: Energy and Environmental Analysis Inc., Updates to the Fuel Economy Model, prepared for Energy Information Administration (EIA) (Washington, DC, June 1998); National Highway Traffic and Safety Administration, Mid-Year Fuel Economy Reports from Auto Manufacturers, 2000; Federal Highway Administration, Highway Statistics 1998 (Washington, DC, November 1999); Oak Ridge National Laboratory, "Fleet Vehicles in the United States: Composition, Operating Characteristics, and Fueling Practices," prepared for the U.S. Department of Energy, Office of Transportation Technologies, and Office of Policy, Planning, and Analysis (Oak Ridge, TN, March 1992); and EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A. Projections: EIA, AEO99 National Energy Modeling System run AEO2001.D101600A.

**Table 50. Transportation Fleet Car and Truck Fuel Consumption by Type and Technology
(Trillion Btu)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Cars 1/										
Conventional Gasoline	1015.73	968.30	939.77	916.48	896.38	840.57	863.64	891.08	917.46	944.62
Distillate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Methanol										
Flex	5.11	5.67	5.84	5.72	5.58	5.23	5.27	5.48	5.61	5.74
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethanol										
Flex	12.04	13.38	13.80	13.50	13.17	12.35	12.44	12.93	13.23	13.54
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG Bi-fuel	46.18	50.73	52.43	51.79	50.70	47.71	47.15	49.04	49.72	50.40
LPG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LPG Bi-fuel	24.04	26.06	26.78	26.41	25.85	24.31	24.11	25.06	25.44	25.82
Electric	1.65	1.78	1.78	1.67	1.53	1.19	1.17	1.22	1.24	1.26
Electric-Diesel Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electric-Gasoline Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell										
Fuel Cell Gasoline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Methanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Fleet Cars	1104.74	1065.93	1040.40	1015.58	993.21	931.37	953.78	984.81	1012.67	1041.32
Light Trucks 1/										
Conventional Gasoline	1877.70	1859.05	1831.88	1826.30	1818.37	1766.66	1801.32	1836.28	1872.12	1908.65
Distillate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Methanol										
Flex	12.07	14.10	15.63	16.28	16.25	15.86	15.99	16.41	16.69	16.98
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethanol										
Flex	28.75	33.64	37.30	38.88	38.79	37.86	38.15	39.16	39.82	40.50
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG Bi-fuel	43.16	49.02	52.90	54.52	54.37	53.07	54.00	55.60	56.91	58.25
LPG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LPG Bi-fuel	27.14	30.28	32.38	33.29	33.19	32.38	32.97	33.92	34.71	35.52
Electric	1.71	1.91	2.00	1.97	1.84	1.49	1.53	1.66	1.75	1.85
Electric-Diesel Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electric-Gasoline Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell										
Fuel Cell Gasoline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Methanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Fleet Light Trucks	3095.28	3053.92	3012.49	2986.81	2956.02	2838.70	2897.74	2967.84	3034.60	3102.85
Total Fleet Vehicles	4200.02	4119.85	4052.89	4002.39	3949.23	3770.07	3851.52	3952.65	4047.23	4144.07
Commercial Light Trucks 2/	651.07	659.92	671.52	684.17	695.63	726.07	776.10	827.68	883.69	943.50

1/ Includes all fleets of 10 or more.

2/ Commercial trucks from 8,500 to 10,000 pounds.

ICE = Internal combustion engine.

CNG = Compressed natural gas.

LNG = Liquefied natural gas.

N/A = Not Applicable.

Sources: 1999 derived using: Oak Ridge National Laboratory, "Fleet Vehicles in the United States: Composition, Operating Characteristics, and Fueling Practices," prepared for the Department of Energy, Office of Transportation Technologies, and Office of Policy, Planning, and Analysis (Oak Ridge, TN, March 1992); Bobit Publishing Company, Fleet Fact Book, various issues (Redondo Beach, California); United States Department of Commerce, Bureau of the Census, "Vehicle Inventory and Use Survey," EC97TV (Washington, DC, October 1999); Federal Highway Administration, Highway Statistics 1998 (Washington, DC, November 1999); Decision Analysis Corporation of Virginia, NEMS Transportation Sector Model: Development of the Light Commercial Truck Model, Final Report, Subtask 19-2, prepared for the Energy Information Administration (EIA) (April 23, 1997); and EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A. Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 51. Transportation Fleet Car and Truck Sales by Type and Technology (Thousands)

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Cars 1/										
Conventional Gasoline	1811.26	1779.01	1757.77	1725.47	1691.59	1649.75	1764.38	1782.97	1853.57	1926.96
Distillate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Methanol										
Flex	8.94	8.78	8.68	8.52	8.35	8.15	8.71	8.80	9.15	9.51
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethanol										
Flex	20.88	20.51	20.26	19.89	19.50	19.02	20.34	20.55	21.37	22.21
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG Bi-fuel	71.02	69.75	68.92	67.65	66.32	64.68	69.18	69.91	72.67	75.55
LPG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LPG Bi-fuel	38.12	37.44	36.99	36.31	35.60	34.72	37.13	37.52	39.01	40.55
Electric	2.70	2.65	2.62	2.57	2.52	2.46	2.63	2.65	2.76	2.87
Electric-Diesel Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electric-Gasoline Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell										
Fuel Cell Gasoline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Methanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Fleet Cars	1952.92	1918.14	1895.24	1860.41	1823.88	1778.77	1902.36	1922.42	1998.53	2077.66
Light Trucks 1/										
Conventional Gasoline	1963.40	1961.64	1966.57	1954.42	1936.29	1932.41	2109.47	2151.33	2269.92	2395.05
Distillate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Methanol										
Flex	14.78	14.77	14.81	14.71	14.58	14.55	15.88	16.20	17.09	18.03
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethanol										
Flex	34.90	34.86	34.95	34.74	34.41	34.34	37.49	38.24	40.34	42.57
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG Bi-fuel	51.25	51.21	51.33	51.02	50.54	50.44	55.06	56.16	59.25	62.52
LPG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LPG Bi-fuel	31.79	31.76	31.84	31.64	31.35	31.29	34.15	34.83	36.75	38.78
Electric	2.22	2.21	2.22	2.21	2.19	2.18	2.38	2.43	2.56	2.70
Electric-Diesel Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electric-Gasoline Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell										
Fuel Cell Gasoline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Methanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Fleet Light Trucks	4051.25	4014.60	3996.97	3949.16	3893.25	3843.98	4156.81	4221.59	4424.09	4636.30
Total Fleet Vehicles	6004.17	5932.74	5892.21	5809.57	5717.13	5622.75	6059.17	6144.01	6422.49	6713.58
Commercial Light Trucks 2/	1054.29	1054.44	1057.82	1051.63	1041.97	1040.24	1137.07	1159.23	1223.74	1291.84

1/ Includes all fleets of 10 or more.

2/ Commercial trucks from 8,500 to 10,000 pounds.

ICE = Internal combustion engine.

CNG = Compressed natural gas.

LNG = Liquefied natural gas.

N/A = Not Applicable.

Sources: 1999 derived using: Oak Ridge National Laboratory, "Fleet Vehicles in the United States: Composition, Operating Characteristics, and Fueling Practices," prepared for the Department of Energy, Office of Transportation Technologies, and Office of Policy, Planning, and Analysis (Oak Ridge, TN, March 1992); Bobit Publishing Company, Fleet Fact Book, various issues (Redondo Beach, California); United States Department of Commerce, Bureau of the Census, "Vehicle Inventory and Use Survey," EC97TV (Washington, DC, October 1999); Federal Highway Administration, Highway Statistics 1998 (Washington, DC, November 1999); Decision Analysis Corporation of Virginia, NEMS Transportation Sector Model: Development of the Light Commercial Truck Model, Final Report, Subtask 19-2, prepared for the Energy Information Administration (EIA) (April 23, 1997); Energy Information Administration (EIA), Describing Current and Potential Markets for Alternative-Fuel Vehicles, DOE/EIA-0604(96) (Washington, DC, March 1996); EIA, Alternatives to Traditional Transportation Fuels 1998, http://www.eia.doe.gov/cneaf/alt_trans98/table1.html; and EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A. Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 52. Transportation Fleet Car and Truck Stock by Type and Technology (Thousands)

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Cars 1/										
Conventional Gasoline	7428.41	7193.41	7072.37	6970.44	6854.03	6572.69	6813.21	7002.16	7227.31	7459.69
Distillate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Methanol										
Flex	37.52	42.14	43.90	43.40	42.78	40.97	41.93	43.35	44.59	45.86
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethanol										
Flex	87.52	98.44	102.59	101.42	99.97	95.74	97.99	101.30	104.19	107.18
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG Bi-fuel	338.89	375.53	392.04	390.55	385.33	369.41	374.37	388.47	398.36	408.51
LPG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LPG Bi-fuel	176.00	192.56	199.93	198.87	196.13	188.02	191.13	198.07	203.30	208.66
Electric	12.68	14.05	14.66	14.59	14.39	13.80	14.00	14.52	14.90	15.28
Electric-Diesel Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electric-Gasoline Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell										
Fuel Cell Gasoline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Methanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Fleet Cars	8081.02	7916.13	7825.49	7719.27	7592.64	7280.63	7532.64	7747.87	7992.61	8245.08
Light Trucks 1/										
Conventional Gasoline	9637.91	9659.96	9610.18	9624.49	9628.85	9531.54	10041.80	10516.23	11046.08	11602.64
Distillate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Methanol										
Flex	62.94	74.04	82.62	86.64	86.90	86.38	90.04	94.89	99.46	104.25
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethanol										
Flex	148.45	174.86	195.27	204.82	205.45	204.22	212.86	224.35	235.14	246.46
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG Bi-fuel	221.34	253.32	275.35	285.30	285.96	283.87	296.83	312.26	327.50	343.49
LPG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LPG Bi-fuel	139.15	156.53	168.66	174.32	174.68	173.36	181.42	190.75	200.10	209.90
Electric	9.56	10.98	11.99	12.45	12.48	12.39	12.95	13.62	14.29	14.98
Electric-Diesel Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electric-Gasoline Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell										
Fuel Cell Gasoline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Methanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Fleet Light Trucks	18300.37	18245.82	18169.56	18107.29	17986.96	17572.38	18368.54	19099.97	19912.86	20760.35
Total Fleet Vehicles	26381.39	26161.95	25995.05	25826.56	25579.60	24853.02	25901.18	26847.83	27904.50	29002.76
Commercial Light Trucks 2/	11481.80	11759.87	12022.53	12261.25	12474.18	13020.88	13987.78	14887.30	15918.56	17021.25

1/ Includes all fleets of 10 or more.

2/ Commercial trucks from 8,500 to 10,000 pounds.

ICE = Internal combustion engine.

CNG = Compressed natural gas.

LNG = Liquefied natural gas.

N/A = Not applicable.

Sources: 1999 derived using: Oak Ridge National Laboratory, "Fleet Vehicles in the United States: Composition, Operating Characteristics, and Fueling Practices," prepared for the Department of Energy, Office of Transportation Technologies, and Office of Policy, Planning, and Analysis (Oak Ridge, TN, March 1992); Bobit Publishing Company, Fleet Fact Book, various issues (Redondo Beach, California); United States Department of Commerce, Bureau of the Census, "Vehicle Inventory and Use Survey," EC97TV (Washington, DC, October 1999); Federal Highway Administration, Highway Statistics 1998 (Washington, DC, November 1999); Decision Analysis Corporation of Virginia, NEMS Transportation Sector Model: Development of the Light Commercial Truck Model, Final Report, Subtask 19-2, (April 23, 1997); Energy Information Administration (EIA), Describing Current and Potential Markets for Alternative-Fuel Vehicles, DOE/EIA-0604(96) (Washington, DC, March 1996); EIA, Alternatives to Traditional Transportation Fuels 1998, http://www.eia.doe.gov/cneaf/alt_trans98/table1.html; and EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A. Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

**Table 53. Transportation Fleet Car and Truck VMT by Type and Technology
(Billion Miles)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Technology Type										
Cars 1/										
Conventional Gasoline	190.36	184.08	180.95	178.33	175.27	167.96	174.23	178.91	184.65	190.57
Distillate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Methanol										
Flex	0.96	1.08	1.12	1.11	1.09	1.05	1.07	1.11	1.14	1.17
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethanol										
Flex	2.24	2.52	2.62	2.59	2.56	2.45	2.51	2.59	2.66	2.74
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG Bi-fuel	8.68	9.61	10.03	9.99	9.85	9.44	9.57	9.93	10.18	10.44
LPG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LPG Bi-fuel	4.51	4.93	5.12	5.09	5.02	4.80	4.89	5.06	5.19	5.33
Electric	0.32	0.36	0.38	0.37	0.37	0.35	0.36	0.37	0.38	0.39
Electric-Diesel Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electric-Gasoline Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell										
Fuel Cell Gasoline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Methanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Fleet Cars	207.09	202.57	200.22	197.49	194.15	186.05	192.62	197.96	204.20	210.64
Light Trucks 1/										
Conventional Gasoline	246.98	247.20	245.89	246.24	246.22	243.57	256.79	268.70	282.22	296.42
Distillate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Methanol										
Flex	1.61	1.89	2.11	2.22	2.22	2.21	2.30	2.42	2.54	2.66
Neat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethanol										
Flex	3.80	4.47	5.00	5.24	5.25	5.22	5.44	5.73	6.01	6.30
Neat	3.80	4.47	5.00	5.24	5.25	5.22	5.44	5.73	6.01	6.30
CNG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CNG Bi-fuel	5.67	6.48	7.05	7.30	7.31	7.25	7.59	7.98	8.37	8.78
LPG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LPG Bi-fuel	3.57	4.01	4.32	4.46	4.47	4.43	4.64	4.87	5.11	5.36
Electric	0.24	0.28	0.31	0.32	0.32	0.32	0.33	0.35	0.37	0.38
Electric-Diesel Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electric-Gasoline Hybrid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell										
Fuel Cell Gasoline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Methanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fuel Cell Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Fleet Light Truck	472.77	471.38	469.88	468.51	465.21	454.26	475.16	493.75	514.76	536.67
Total Fleet Vehicles	679.86	673.95	670.10	666.00	659.36	640.31	667.78	691.71	718.94	747.23
Commercial Light Trucks 2/	79.92	81.62	83.62	85.73	87.70	93.25	102.73	112.54	123.64	135.83

1/ Includes all fleets of 10 or more.

2/ Commercial trucks from 8,500 to 10,000 pounds.

ICE = Internal combustion engine.

CNG = Compressed natural gas.

LNG = Liquefied natural gas.

N/A = Not applicable.

Sources: 1999 derived using: Oak Ridge National Laboratory, "Fleet Vehicles in the United States: Composition, Operating Characteristics, and Fueling Practices," prepared for the Department of Energy, Office of Transportation Technologies, and Office of Policy, Planning, and Analysis (Oak Ridge, TN, March 1992); Bobit Publishing Company, Fleet Fact Book, various issues (Redondo Beach, California); Federal Highway Administration, Highway Statistics 1998 (Washington, DC, November 1999); Decision Analysis Corporation of Virginia, NEMS Transportation Sector Model: Development of the Light Commercial Truck Model, Final Report, Subtask 19-2, (April 23, 1997); and Energy Information Administration (EIA), AEO2001 National Energy Modeling System run AEO2001.D101600A. Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

**Table 56. New Light-Duty Vehicle Fuel Economy
(Miles per Gallon)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Gasoline										
Mini-compact Cars	26.55	26.61	26.77	26.88	26.97	27.39	27.71	27.99	28.29	28.60
Subcompact Cars	34.60	34.73	34.99	35.27	35.72	36.81	36.79	36.78	36.77	36.76
Compact Cars	32.15	32.13	32.17	32.46	32.69	33.65	33.58	33.54	33.49	33.43
Midsize Cars	29.20	29.28	29.39	29.60	29.88	30.61	30.63	30.79	30.87	30.96
Large Cars	26.70	26.76	26.86	27.01	27.27	28.33	28.49	28.50	28.59	28.68
Two Seater Cars	28.87	28.88	29.04	29.19	29.35	30.06	30.39	30.65	30.95	31.25
Small Pickup	26.29	26.14	26.13	26.14	26.24	26.87	27.65	28.38	29.17	29.98
Large Pickup	19.38	19.29	19.34	19.46	19.59	20.15	20.82	21.49	22.20	22.93
Small Van	26.40	26.17	26.16	26.18	26.28	26.95	27.84	28.78	29.75	30.74
Large Van	19.37	19.35	19.42	19.62	19.86	20.64	21.35	22.09	22.85	23.63
Small Utility	22.91	22.81	22.79	22.82	22.94	23.59	24.40	25.03	25.79	26.57
Large Utility	17.76	17.71	17.78	17.96	18.19	18.95	19.66	20.25	20.94	21.65
Turbo Direct Injection Diesel										
Mini-compact Cars	35.44	35.18	35.30	35.38	35.45	35.98	36.24	36.40	36.61	36.83
Subcompact Cars	45.80	45.87	46.23	46.70	47.10	48.32	48.07	47.88	47.66	47.44
Compact Cars	42.72	42.56	42.63	42.78	43.04	43.91	43.85	43.50	43.29	43.09
Midsize Cars	38.88	38.88	38.98	39.15	39.34	40.11	40.19	40.15	40.17	40.18
Large Cars	35.59	35.61	35.80	36.00	36.29	37.38	37.35	37.29	37.24	37.19
Two Seater Cars	38.45	38.22	38.45	38.60	38.76	39.62	39.81	40.00	40.18	40.37
Small Pickup	35.34	35.07	35.08	35.04	35.09	35.62	36.27	37.04	37.78	38.52
Large Pickup	26.00	25.84	25.91	26.02	26.17	26.81	27.58	28.34	29.14	29.96
Small Van	35.39	35.03	35.00	34.99	35.05	35.64	36.41	37.50	38.46	39.45
Large Van	25.95	25.84	25.91	26.05	26.32	27.25	28.04	28.88	29.72	30.60
Small Utility	30.54	30.33	30.33	30.31	30.39	31.07	31.72	32.37	33.04	33.73
Large Utility	23.83	23.70	23.74	23.89	24.14	25.10	25.87	26.56	27.32	28.11
Methanol										
Mini-compact Cars	28.79	28.63	28.71	28.83	28.93	29.43	29.80	30.00	30.29	30.58
Subcompact Cars	37.08	37.14	37.41	37.71	38.06	39.26	39.42	39.35	39.40	39.45
Compact Cars	34.57	34.49	34.54	34.70	34.94	35.93	35.98	35.90	35.89	35.88
Midsize Cars	31.38	31.38	31.53	31.84	32.12	32.89	32.90	33.03	33.09	33.16
Large Cars	28.72	28.76	28.88	29.04	29.31	30.39	30.55	30.55	30.63	30.72
Two Seater Cars	31.17	31.08	31.17	31.33	31.51	32.29	32.66	32.86	33.14	33.43
Small Pickup	28.35	28.16	28.15	28.15	28.24	28.88	29.69	30.46	31.29	32.13
Large Pickup	20.89	20.78	20.83	20.95	21.09	21.67	22.38	23.09	23.83	24.59
Small Van	28.43	28.17	28.15	28.17	28.26	28.94	29.86	30.86	31.87	32.92
Large Van	20.88	20.84	20.89	21.10	21.34	22.17	22.90	23.68	24.47	25.29
Small Utility	24.66	24.54	24.52	24.54	24.66	25.33	26.15	26.82	27.60	28.40
Large Utility	19.14	19.09	19.14	19.33	19.56	20.35	21.08	21.71	22.43	23.17
Methanol Flex										
Mini-compact Cars	27.29	27.15	27.24	27.35	27.44	27.91	28.26	28.47	28.76	29.04
Subcompact Cars	35.21	35.30	35.55	35.84	36.18	37.33	37.38	37.35	37.36	37.37
Compact Cars	32.73	32.67	32.73	32.88	33.11	34.09	34.13	34.06	34.05	34.04
Midsize Cars	29.70	29.70	29.85	30.10	30.41	31.16	31.18	31.32	31.40	31.48
Large Cars	27.20	27.24	27.35	27.50	27.76	28.82	28.99	29.00	29.08	29.17
Two Seater Cars	29.54	29.45	29.56	29.71	29.87	30.62	30.97	31.18	31.47	31.76
Small Pickup	26.79	26.62	26.61	26.62	26.71	27.35	28.13	28.87	29.66	30.48
Large Pickup	19.75	19.65	19.70	19.82	19.96	20.51	21.20	21.87	22.58	23.32
Small Van	26.90	26.66	26.64	26.67	26.76	27.43	28.33	29.29	30.26	31.26
Large Van	19.74	19.71	19.78	19.98	20.22	21.01	21.73	22.47	23.23	24.03
Small Utility	23.34	23.23	23.21	23.24	23.36	24.01	24.83	25.47	26.23	27.01
Large Utility	18.10	18.05	18.12	18.30	18.52	19.29	20.01	20.61	21.30	22.02
Ethanol										
Mini-compact Cars	27.79	27.64	27.73	27.85	27.94	28.42	28.77	28.98	29.27	29.55
Subcompact Cars	35.98	36.17	36.43	36.83	37.18	38.07	38.05	38.01	37.98	37.95
Compact Cars	33.35	33.28	33.32	33.50	33.73	34.70	34.75	34.68	34.67	34.66
Midsize Cars	30.26	30.26	30.40	30.71	30.99	31.74	31.75	31.89	31.96	32.04
Large Cars	27.70	27.75	27.86	28.01	28.28	29.35	29.51	29.52	29.60	29.69
Two Seater Cars	30.08	29.99	30.09	30.25	30.42	31.18	31.53	31.74	32.03	32.32
Small Pickup	27.31	27.13	27.13	27.13	27.22	27.86	28.65	29.40	30.21	31.03

**Table 56. New Light-Duty Vehicle Fuel Economy
(Miles per Gallon)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Large Pickup	20.13	20.03	20.08	20.20	20.34	20.90	21.59	22.28	23.00	23.74
Small Van	27.41	27.17	27.15	27.17	27.26	27.94	28.84	29.81	30.80	31.82
Large Van	20.12	20.09	20.15	20.36	20.59	21.40	22.12	22.87	23.65	24.45
Small Utility	23.78	23.66	23.64	23.67	23.79	24.45	25.28	25.92	26.69	27.48
Large Utility	18.45	18.40	18.46	18.64	18.87	19.65	20.37	20.98	21.68	22.40
Ethanol Flex										
Mini-compact Cars	27.04	26.90	26.99	27.10	27.19	27.66	28.00	28.22	28.50	28.79
Subcompact Cars	34.79	34.88	35.12	35.40	35.75	37.00	37.04	37.02	37.03	37.04
Compact Cars	32.43	32.37	32.43	32.58	32.81	33.78	33.82	33.76	33.75	33.74
Midsized Cars	29.42	29.42	29.56	29.82	30.13	30.87	30.89	31.03	31.11	31.19
Large Cars	26.94	26.99	27.09	27.24	27.51	28.56	28.73	28.74	28.82	28.91
Two Seater Cars	29.27	29.18	29.29	29.44	29.60	30.34	30.69	30.91	31.19	31.48
Small Pickup	26.53	26.36	26.36	26.36	26.46	27.09	27.87	28.60	29.39	30.20
Large Pickup	19.56	19.46	19.51	19.63	19.77	20.32	21.00	21.67	22.38	23.11
Small Van	26.64	26.41	26.39	26.42	26.51	27.18	28.07	29.02	29.99	30.99
Large Van	19.55	19.52	19.59	19.80	20.03	20.82	21.53	22.27	23.03	23.82
Small Utility	23.12	23.01	22.99	23.02	23.14	23.79	24.60	25.24	26.00	26.78
Large Utility	17.93	17.88	17.95	18.13	18.35	19.12	19.83	20.43	21.11	21.83
Compressed Natural Gas (CNG)										
Mini-compact Cars	28.47	28.30	28.45	28.56	28.66	29.29	29.79	29.95	30.28	30.62
Subcompact Cars	36.79	36.82	37.16	37.44	37.90	39.08	39.22	39.16	39.19	39.23
Compact Cars	34.13	33.95	34.06	34.19	34.42	35.29	35.77	35.66	35.84	36.03
Midsized Cars	31.01	30.88	31.10	31.24	31.46	32.27	32.78	32.81	33.08	33.36
Large Cars	28.51	28.52	28.66	28.80	29.05	29.97	30.45	30.43	30.67	30.91
Two Seater Cars	30.87	30.70	30.87	31.03	31.21	32.12	32.60	32.79	33.13	33.48
Small Pickup	28.32	28.12	28.12	28.11	28.19	28.70	29.29	30.12	30.85	31.60
Large Pickup	20.86	20.75	20.80	20.91	21.05	21.56	22.11	22.80	23.44	24.11
Small Van	28.42	28.15	28.13	28.14	28.23	28.80	29.51	30.49	31.38	32.29
Large Van	20.85	20.80	20.86	21.06	21.30	22.05	22.64	23.39	24.08	24.80
Small Utility	24.61	24.48	24.46	24.48	24.59	25.14	25.76	26.55	27.29	28.04
Large Utility	19.13	19.07	19.12	19.30	19.53	20.25	20.82	21.50	22.16	22.83
CNG Bi-Fuel										
Mini-compact Cars	26.47	26.30	26.47	26.58	26.67	27.33	27.72	27.91	28.21	28.50
Subcompact Cars	34.19	34.22	34.54	34.81	35.13	36.35	36.53	36.51	36.60	36.68
Compact Cars	31.71	31.55	31.65	31.77	32.00	32.85	33.31	33.22	33.41	33.59
Midsized Cars	28.80	28.68	28.89	29.03	29.23	30.02	30.49	30.54	30.81	31.08
Large Cars	26.50	26.51	26.64	26.77	27.01	27.91	28.37	28.35	28.56	28.79
Two Seater Cars	28.71	28.54	28.71	28.86	29.02	29.94	30.34	30.54	30.85	31.16
Small Pickup	26.25	26.08	26.07	26.07	26.16	26.67	27.25	28.03	28.73	29.45
Large Pickup	19.35	19.25	19.30	19.41	19.54	20.02	20.56	21.21	21.83	22.47
Small Van	26.38	26.14	26.13	26.15	26.24	26.81	27.50	28.43	29.28	30.16
Large Van	19.34	19.31	19.38	19.58	19.81	20.52	21.09	21.80	22.48	23.17
Small Utility	22.85	22.74	22.72	22.75	22.86	23.39	24.00	24.75	25.46	26.19
Large Utility	17.74	17.69	17.76	17.94	18.16	18.84	19.41	20.05	20.68	21.33
Liquefied Petroleum Gas (LPG)										
Mini-compact Cars	27.52	27.35	27.52	27.63	27.73	28.34	28.76	28.94	29.24	29.55
Subcompact Cars	35.57	35.60	35.93	36.20	36.53	37.77	37.91	37.87	37.91	37.96
Compact Cars	32.99	32.82	32.92	33.05	33.27	34.15	34.62	34.52	34.71	34.89
Midsized Cars	29.94	29.81	30.03	30.16	30.37	31.18	31.67	31.72	31.99	32.26
Large Cars	27.54	27.55	27.68	27.81	28.06	28.99	29.47	29.44	29.67	29.90
Two Seater Cars	29.86	29.69	29.85	30.01	30.18	31.08	31.50	31.69	32.00	32.31
Small Pickup	27.28	27.09	27.09	27.09	27.17	27.69	28.28	29.09	29.82	30.57
Large Pickup	20.12	20.01	20.06	20.17	20.31	20.81	21.36	22.03	22.67	23.33
Small Van	27.40	27.14	27.13	27.14	27.23	27.80	28.51	29.46	30.33	31.22
Large Van	20.11	20.07	20.13	20.33	20.56	21.30	21.88	22.62	23.32	24.03
Small Utility	23.76	23.64	23.62	23.65	23.75	24.31	24.92	25.72	26.45	27.21
Large Utility	18.44	18.39	18.45	18.63	18.85	19.56	20.13	20.80	21.45	22.12
LPG Bi-Fuel										
Mini-compact Cars	26.54	26.37	26.54	26.64	26.74	27.35	27.73	27.92	28.22	28.51

**Table 56. New Light-Duty Vehicle Fuel Economy
(Miles per Gallon)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Subcompact Cars	34.18	34.21	34.52	34.79	35.11	36.44	36.57	36.58	36.65	36.72
Compact Cars	31.78	31.62	31.72	31.84	32.07	32.94	33.39	33.31	33.50	33.69
Midsize Cars	28.84	28.72	28.93	29.07	29.26	30.07	30.54	30.60	30.86	31.13
Large Cars	26.54	26.56	26.73	26.86	27.10	28.04	28.43	28.41	28.60	28.79
Two Seater Cars	28.79	28.62	28.85	28.99	29.16	30.07	30.37	30.58	30.84	31.10
Small Pickup	26.25	26.08	26.08	26.08	26.16	26.68	27.27	28.06	28.78	29.51
Large Pickup	19.36	19.27	19.31	19.43	19.56	20.05	20.59	21.25	21.88	22.53
Small Van	26.38	26.14	26.12	26.15	26.24	26.81	27.51	28.44	29.29	30.16
Large Van	19.36	19.33	19.40	19.60	19.82	20.54	21.12	21.84	22.52	23.23
Small Utility	22.89	22.78	22.76	22.79	22.89	23.44	24.05	24.82	25.54	26.28
Large Utility	17.75	17.70	17.77	17.95	18.16	18.86	19.43	20.08	20.72	21.38
Electric										
Mini-compact Cars	28.69	31.21	34.52	38.74	44.24	44.17	43.87	43.60	43.32	43.04
Subcompact Cars	36.69	39.85	44.04	49.38	56.31	55.73	54.98	54.40	53.74	53.09
Compact Cars	34.95	38.00	42.06	47.16	53.82	53.29	52.67	52.27	51.77	51.28
Midsize Cars	30.19	32.88	36.41	40.84	46.62	46.35	46.08	45.91	45.69	45.48
Large Cars	27.34	29.74	32.92	36.95	42.12	41.56	41.05	41.03	40.77	40.51
Two Seater Cars	31.31	34.06	37.69	42.31	48.29	48.00	47.60	47.43	47.15	46.87
Small Pickup	28.39	30.82	34.06	38.12	43.31	42.15	40.91	40.11	39.12	38.17
Large Pickup	21.76	23.63	26.12	29.18	33.12	32.24	31.35	30.84	30.17	29.50
Small Van	25.04	27.21	30.07	33.66	38.24	37.20	36.04	35.28	34.35	33.45
Large Van	21.21	23.11	25.56	28.67	32.68	32.11	31.21	30.71	30.04	29.38
Small Utility	26.22	28.47	31.45	35.14	39.95	38.92	37.87	37.31	36.53	35.76
Large Utility	19.92	21.70	23.99	26.87	30.63	30.15	29.38	28.93	28.33	27.75
Diesel-Electric Hybrid										
Mini-compact Cars	38.01	37.57	37.48	37.46	37.47	37.69	37.63	37.81	37.87	37.92
Subcompact Cars	51.26	50.65	50.30	50.08	49.94	49.68	48.65	48.25	47.54	46.85
Compact Cars	49.09	48.49	48.09	47.82	47.65	47.27	46.07	45.52	44.68	43.84
Midsize Cars	43.90	43.36	43.10	42.95	42.87	42.72	42.05	41.80	41.35	40.90
Large Cars	41.31	40.75	40.44	40.24	40.12	39.97	39.07	38.76	38.17	37.59
Two Seater Cars	42.31	41.79	41.65	41.57	41.56	41.74	41.47	41.57	41.48	41.39
Small Pickup	41.08	40.50	40.22	39.98	39.81	39.45	38.69	38.30	37.74	37.19
Large Pickup	30.58	30.16	29.95	29.79	29.71	29.60	29.14	28.87	28.51	28.16
Small Van	40.74	40.15	39.87	39.64	39.47	39.12	38.37	38.03	37.49	36.96
Large Van	30.45	30.06	29.85	29.70	29.70	29.88	29.43	29.21	28.88	28.55
Small Utility	35.23	34.75	34.51	34.32	34.19	33.99	33.43	33.18	32.79	32.40
Large Utility	28.12	27.78	27.59	27.47	27.48	27.65	27.28	27.10	26.83	26.56
Gasoline-Electric Hybrid										
Mini-compact Cars	34.61	34.21	34.14	34.12	34.13	34.38	34.34	34.49	34.55	34.60
Subcompact Cars	46.59	46.05	45.74	45.54	45.42	45.27	44.39	44.08	43.50	42.92
Compact Cars	44.59	44.06	43.71	43.47	43.33	43.06	42.04	41.58	40.86	40.15
Midsize Cars	39.92	39.43	39.21	39.07	39.01	38.94	38.37	38.13	37.74	37.34
Large Cars	37.49	36.99	36.71	36.53	36.45	36.38	35.62	35.37	34.88	34.39
Two Seater Cars	38.48	38.02	37.89	37.82	37.82	38.04	37.83	37.91	37.84	37.78
Small Pickup	37.26	36.75	36.50	36.29	36.14	35.88	35.26	34.93	34.47	34.01
Large Pickup	27.74	27.37	27.19	27.06	27.00	26.94	26.56	26.32	26.02	25.72
Small Van	36.94	36.42	36.17	35.96	35.82	35.56	34.94	34.67	34.23	33.80
Large Van	27.66	27.34	27.15	27.04	27.07	27.29	26.92	26.73	26.45	26.18
Small Utility	32.02	31.60	31.39	31.23	31.12	31.00	30.53	30.32	29.99	29.66
Large Utility	25.52	25.24	25.08	25.00	25.02	25.24	24.93	24.78	24.56	24.34
Fuel Cell Methanol										
Mini-compact Cars	46.32	45.72	45.42	45.19	45.00	44.92	44.62	44.35	44.06	43.78
Subcompact Cars	59.22	58.37	57.95	57.60	57.27	56.68	55.92	55.32	54.66	54.00
Compact Cars	56.41	55.67	55.34	55.00	54.74	54.20	53.57	53.17	52.66	52.15
Midsize Cars	48.74	48.17	47.91	47.64	47.42	47.14	46.87	46.69	46.47	46.26
Large Cars	44.14	43.57	43.31	43.10	42.84	42.27	41.75	41.73	41.47	41.20
Two Seater Cars	50.55	49.89	49.59	49.34	49.11	48.82	48.42	48.24	47.95	47.67
Small Pickup	45.84	45.16	44.82	44.46	44.05	42.87	41.60	40.79	39.79	38.82
Large Pickup	35.12	34.61	34.37	34.03	33.68	32.79	31.89	31.37	30.68	30.01
Small Van	40.42	39.86	39.57	39.26	38.90	37.84	36.65	35.88	34.94	34.03
Large Van	34.23	33.85	33.64	33.44	33.24	32.66	31.74	31.24	30.55	29.88

**Table 56. New Light-Duty Vehicle Fuel Economy
(Miles per Gallon)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Small Utility	42.32	41.71	41.38	40.99	40.63	39.59	38.51	37.95	37.15	36.37
Large Utility	32.16	31.79	31.56	31.34	31.15	30.67	29.88	29.42	28.82	28.22
Fuel Cell Hydrogen										
Mini-compact Cars	50.79	50.13	49.80	49.55	49.34	49.26	48.92	48.63	48.31	48.00
Subcompact Cars	64.94	64.01	63.54	63.16	62.80	62.15	61.31	60.66	59.93	59.21
Compact Cars	61.86	61.05	60.68	60.31	60.02	59.43	58.74	58.30	57.74	57.18
Midsize Cars	53.44	52.82	52.53	52.24	51.99	51.68	51.39	51.20	50.96	50.72
Large Cars	48.40	47.77	47.49	47.25	46.97	46.35	45.78	45.76	45.47	45.18
Two Seater Cars	55.42	54.71	54.38	54.11	53.85	53.53	53.09	52.90	52.58	52.27
Small Pickup	50.26	49.51	49.14	48.75	48.30	47.01	45.62	44.73	43.63	42.56
Large Pickup	38.51	37.95	37.68	37.32	36.93	35.95	34.97	34.39	33.64	32.90
Small Van	44.32	43.71	43.39	43.04	42.65	41.49	40.19	39.34	38.31	37.31
Large Van	37.54	37.12	36.88	36.66	36.45	35.81	34.80	34.25	33.50	32.76
Small Utility	46.40	45.73	45.37	44.94	44.55	43.41	42.23	41.61	40.74	39.88
Large Utility	35.26	34.86	34.61	34.37	34.15	33.62	32.76	32.26	31.60	30.95
Fuel Cell Gasoline										
Mini-compact Cars	43.40	42.84	42.56	42.34	42.17	42.09	41.81	41.55	41.29	41.02
Subcompact Cars	55.49	54.70	54.30	53.97	53.67	53.11	52.40	51.84	51.21	50.60
Compact Cars	52.86	52.17	51.86	51.54	51.29	50.78	50.20	49.82	49.34	48.87
Midsize Cars	45.67	45.14	44.89	44.64	44.43	44.17	43.92	43.75	43.55	43.34
Large Cars	41.36	40.83	40.59	40.38	40.14	39.61	39.12	39.10	38.86	38.61
Two Seater Cars	47.36	46.75	46.47	46.24	46.02	45.74	45.37	45.20	44.94	44.67
Small Pickup	42.95	42.31	41.99	41.66	41.28	40.17	38.98	38.22	37.29	36.37
Large Pickup	32.91	32.43	32.20	31.89	31.56	30.72	29.88	29.39	28.75	28.12
Small Van	37.88	37.35	37.08	36.78	36.45	35.46	34.34	33.62	32.74	31.88
Large Van	32.08	31.72	31.52	31.33	31.15	30.60	29.74	29.27	28.63	28.00
Small Utility	39.65	39.08	38.77	38.41	38.08	37.09	36.09	35.56	34.81	34.08
Large Utility	30.14	29.79	29.57	29.37	29.19	28.73	28.00	27.57	27.00	26.45

Sources: 1999 derived using: Energy and Environmental Analysis Inc., Updates to the Fuel Economy Model, prepared for Energy Information Administration (EIA) (Washington, DC, June 1998); National Highway Traffic and Safety Administration, Mid-Model Year Fuel Economy Reports from Auto Manufacturers, 2000; and EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A. Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

Table 57. New Light-Duty Vehicle Prices
(Thousands 1990 Dollars)

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Gasoline										
Mini-compact Cars	24.7	25.1	25.1	25.2	25.2	25.4	25.6	25.7	25.9	26.0
Subcompact Cars	16.6	17.0	17.1	17.1	17.2	17.4	17.6	17.8	18.0	18.2
Compact Cars	14.9	15.2	15.3	15.4	15.4	15.6	15.9	16.1	16.3	16.6
Midsize Cars	19.1	19.5	19.5	19.6	19.6	19.8	20.0	20.2	20.4	20.6
Large Cars	24.0	24.4	24.4	24.5	24.6	24.8	25.1	25.3	25.5	25.8
Two Seater Cars	26.2	26.6	26.7	26.7	26.8	26.9	27.2	27.3	27.5	27.7
Small Pickup	14.1	14.4	14.5	14.5	14.5	14.7	14.9	15.1	15.3	15.5
Large Pickup	16.8	17.2	17.2	17.3	17.3	17.5	17.8	17.9	18.2	18.4
Small Van	19.7	20.1	20.1	20.2	20.2	20.4	20.6	20.8	21.0	21.2
Large Van	17.8	18.1	18.2	18.2	18.3	18.5	18.7	18.9	19.1	19.3
Small Utility	20.4	20.8	20.8	20.8	20.9	21.1	21.3	21.5	21.7	21.9
Large Utility	23.5	23.8	23.8	23.9	24.0	24.1	24.4	24.5	24.8	25.0
Turbo Direct Injection Diesel										
Mini-compact Cars	26.4	26.8	26.8	26.8	26.9	27.0	27.1	27.3	27.4	27.5
Subcompact Cars	17.7	18.0	18.1	18.2	18.2	18.4	18.5	18.6	18.8	18.9
Compact Cars	15.7	16.1	16.1	16.2	16.2	16.4	16.6	16.8	17.1	17.3
Midsize Cars	20.3	20.7	20.7	20.8	20.8	21.0	21.2	21.3	21.5	21.6
Large Cars	25.7	26.0	26.1	26.2	26.2	26.5	26.7	26.9	27.1	27.3
Two Seater Cars	28.2	28.5	28.6	28.6	28.6	28.8	29.0	29.1	29.3	29.5
Small Pickup	15.4	15.7	15.8	15.8	15.8	16.0	16.1	16.3	16.5	16.7
Large Pickup	18.6	18.9	19.0	19.0	19.0	19.2	19.5	19.7	19.9	20.2
Small Van	20.9	21.3	21.3	21.3	21.4	21.5	21.7	21.9	22.0	22.2
Large Van	20.1	20.4	20.5	20.5	20.6	20.8	21.0	21.2	21.5	21.7
Small Utility	21.6	21.9	22.0	22.0	22.1	22.2	22.4	22.6	22.7	22.9
Large Utility	25.0	25.3	25.4	25.4	25.5	25.7	25.9	26.0	26.2	26.4
Methanol										
Mini-compact Cars	27.0	27.3	27.3	27.4	27.4	27.6	27.8	27.9	28.0	28.2
Subcompact Cars	18.2	18.6	18.7	18.7	18.8	19.0	19.2	19.4	19.6	19.8
Compact Cars	16.5	16.9	16.9	17.0	17.0	17.2	17.5	17.7	18.0	18.2
Midsize Cars	20.9	21.3	21.3	21.4	21.4	21.6	21.8	22.0	22.2	22.4
Large Cars	26.2	26.5	26.6	26.7	26.7	27.0	27.2	27.5	27.7	28.0
Two Seater Cars	28.7	29.1	29.1	29.2	29.2	29.4	29.6	29.8	30.0	30.2
Small Pickup	15.8	16.1	16.1	16.2	16.2	16.4	16.6	16.8	17.0	17.2
Large Pickup	18.7	19.0	19.1	19.1	19.2	19.3	19.6	19.8	20.0	20.2
Small Van	21.4	21.8	21.8	21.8	21.9	22.0	22.3	22.5	22.7	22.9
Large Van	19.6	19.9	20.0	20.0	20.1	20.3	20.5	20.7	20.9	21.2
Small Utility	22.1	22.4	22.5	22.5	22.6	22.8	23.0	23.2	23.4	23.6
Large Utility	25.3	25.6	25.6	25.7	25.8	25.9	26.2	26.3	26.6	26.8
Methanol Flex										
Mini-compact Cars	27.1	27.4	27.5	27.5	27.6	27.7	27.9	28.0	28.2	28.3
Subcompact Cars	18.3	18.7	18.8	18.8	18.9	19.1	19.3	19.5	19.7	19.9
Compact Cars	16.6	17.0	17.0	17.1	17.1	17.3	17.6	17.8	18.1	18.3
Midsize Cars	21.1	21.4	21.4	21.5	21.6	21.7	21.9	22.1	22.3	22.5
Large Cars	26.3	26.7	26.8	26.8	26.9	27.1	27.4	27.6	27.9	28.1
Two Seater Cars	28.9	29.2	29.3	29.3	29.4	29.6	29.8	30.0	30.2	30.4
Small Pickup	15.9	16.2	16.3	16.3	16.4	16.5	16.8	16.9	17.2	17.4
Large Pickup	18.8	19.2	19.2	19.3	19.4	19.5	19.8	19.9	20.2	20.4
Small Van	21.6	21.9	21.9	22.0	22.0	22.2	22.4	22.6	22.8	23.1
Large Van	19.8	20.1	20.2	20.2	20.3	20.5	20.7	20.9	21.1	21.3
Small Utility	22.3	22.6	22.6	22.7	22.7	22.9	23.1	23.3	23.5	23.8
Large Utility	25.4	25.8	25.8	25.9	26.0	26.1	26.4	26.5	26.7	26.9
Ethanol										
Mini-compact Cars	27.0	27.3	27.3	27.4	27.4	27.6	27.8	27.9	28.1	28.2
Subcompact Cars	18.3	18.6	18.7	18.8	18.8	19.0	19.2	19.4	19.6	19.8
Compact Cars	16.5	16.9	16.9	17.0	17.0	17.2	17.5	17.7	18.0	18.2
Midsize Cars	20.9	21.3	21.3	21.4	21.4	21.6	21.8	22.0	22.2	22.4
Large Cars	26.2	26.5	26.6	26.7	26.7	27.0	27.2	27.5	27.7	28.0
Two Seater Cars	28.8	29.1	29.1	29.2	29.2	29.4	29.6	29.8	30.0	30.2
Small Pickup	15.8	16.1	16.2	16.2	16.2	16.4	16.6	16.8	17.0	17.2

**Table 57. New Light-Duty Vehicle Prices
(Thousands 1990 Dollars)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Large Pickup	18.7	19.0	19.1	19.1	19.2	19.3	19.6	19.8	20.0	20.2
Small Van	21.4	21.8	21.8	21.8	21.9	22.0	22.3	22.5	22.7	22.9
Large Van	19.6	19.9	20.0	20.0	20.1	20.3	20.5	20.7	20.9	21.2
Small Utility	22.1	22.4	22.5	22.5	22.6	22.8	23.0	23.2	23.4	23.6
Large Utility	25.3	25.6	25.7	25.7	25.8	25.9	26.2	26.3	26.6	26.8
Ethanol Flex										
Mini-compact Cars	27.1	27.4	27.5	27.5	27.6	27.7	27.9	28.0	28.2	28.3
Subcompact Cars	18.3	18.7	18.8	18.8	18.9	19.1	19.3	19.5	19.7	19.9
Compact Cars	16.6	17.0	17.0	17.1	17.1	17.3	17.6	17.8	18.1	18.3
Midsize Cars	21.1	21.4	21.4	21.5	21.6	21.7	21.9	22.1	22.3	22.5
Large Cars	26.3	26.7	26.8	26.8	26.9	27.1	27.4	27.6	27.9	28.1
Two Seater Cars	28.9	29.2	29.3	29.3	29.4	29.6	29.8	30.0	30.2	30.4
Small Pickup	15.4	15.7	15.8	15.8	15.9	16.1	16.3	16.4	16.6	16.8
Large Pickup	18.1	18.5	18.5	18.6	18.7	18.9	19.1	19.3	19.5	19.7
Small Van	20.5	20.8	20.9	20.9	21.0	21.1	21.3	21.5	21.7	21.9
Large Van	19.8	20.1	20.2	20.2	20.3	20.5	20.7	20.9	21.1	21.3
Small Utility	20.7	21.0	21.1	21.1	21.2	21.3	21.6	21.8	22.0	22.2
Large Utility	24.1	24.4	24.4	24.5	24.6	24.7	24.9	25.0	25.1	25.3
Compressed Natural Gas (CNG)										
Mini-compact Cars	31.6	31.9	32.0	32.0	32.1	32.2	32.4	32.5	32.7	32.8
Subcompact Cars	21.6	22.0	22.1	22.1	22.2	22.4	22.6	22.8	23.0	23.2
Compact Cars	20.0	20.3	20.3	20.4	20.5	20.7	20.9	21.2	21.4	21.7
Midsize Cars	24.5	24.9	24.9	25.0	25.0	25.2	25.4	25.6	25.8	26.0
Large Cars	30.6	31.0	31.1	31.1	31.2	31.4	31.7	31.9	32.2	32.4
Two Seater Cars	34.0	34.3	34.4	34.4	34.5	34.6	34.9	35.0	35.2	35.4
Small Pickup	19.2	19.5	19.6	19.6	19.6	19.8	20.0	20.2	20.4	20.6
Large Pickup	22.2	22.5	22.6	22.6	22.7	22.9	23.1	23.3	23.5	23.7
Small Van	24.8	25.2	25.2	25.3	25.3	25.4	25.7	25.9	26.1	26.3
Large Van	23.1	23.5	23.5	23.6	23.6	23.8	24.0	24.2	24.4	24.7
Small Utility	25.5	25.9	25.9	26.0	26.0	26.2	26.4	26.5	26.7	26.9
Large Utility	28.8	29.1	29.2	29.2	29.3	29.4	29.7	29.8	30.0	30.2
CNG Bi-Fuel										
Mini-compact Cars	31.5	31.8	31.8	31.9	31.9	32.1	32.3	32.4	32.5	32.7
Subcompact Cars	21.5	21.9	22.0	22.0	22.1	22.3	22.5	22.7	22.9	23.1
Compact Cars	19.9	20.2	20.3	20.3	20.4	20.6	20.9	21.1	21.3	21.6
Midsize Cars	23.9	24.2	24.3	24.3	24.4	24.5	24.8	24.9	25.1	25.3
Large Cars	30.1	30.4	30.5	30.6	30.6	30.9	31.2	31.4	31.6	31.9
Two Seater Cars	33.8	34.2	34.2	34.3	34.3	34.5	34.7	34.9	35.1	35.3
Small Pickup	18.4	18.8	18.8	18.9	18.9	19.1	19.3	19.5	19.7	19.9
Large Pickup	20.8	21.1	21.2	21.2	21.3	21.5	21.7	21.9	22.1	22.3
Small Van	24.1	24.4	24.5	24.5	24.6	24.7	24.9	25.1	25.3	25.6
Large Van	21.7	22.1	22.1	22.2	22.2	22.4	22.6	22.8	23.0	23.3
Small Utility	24.8	25.1	25.2	25.2	25.3	25.4	25.4	25.4	25.4	25.4
Large Utility	27.5	27.8	27.9	27.9	28.0	28.1	28.3	28.2	28.3	28.4
Liquefied Petroleum Gas (LPG)										
Mini-compact Cars	29.9	30.3	30.3	30.4	30.4	30.5	30.7	30.9	31.0	31.2
Subcompact Cars	20.4	20.8	20.9	20.9	21.0	21.2	21.4	21.6	21.8	22.0
Compact Cars	18.7	19.1	19.1	19.2	19.2	19.4	19.7	19.9	20.2	20.5
Midsize Cars	23.8	24.2	24.2	24.3	24.3	24.5	24.7	24.9	25.1	25.3
Large Cars	29.5	29.8	29.9	30.0	30.0	30.3	30.6	30.8	31.1	31.3
Two Seater Cars	32.1	32.4	32.5	32.6	32.6	32.8	33.0	33.2	33.4	33.6
Small Pickup	18.6	19.0	19.0	19.1	19.1	19.3	19.5	19.7	19.9	20.1
Large Pickup	22.3	22.6	22.7	22.7	22.8	22.9	23.2	23.4	23.6	23.8
Small Van	24.3	24.6	24.7	24.7	24.8	24.9	25.1	25.3	25.6	25.8
Large Van	23.2	23.5	23.6	23.7	23.7	23.9	24.1	24.3	24.5	24.8
Small Utility	25.0	25.3	25.4	25.4	25.5	25.6	25.9	25.7	25.8	25.9
Large Utility	28.8	29.1	29.2	29.2	29.3	29.5	29.7	29.9	30.1	30.3
LPG Bi-Fuel										
Mini-compact Cars	29.8	30.1	30.2	30.2	30.2	30.4	30.6	30.7	30.9	31.0

**Table 57. New Light-Duty Vehicle Prices
(Thousands 1990 Dollars)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Subcompact Cars	20.3	20.6	20.7	20.8	20.8	21.1	21.3	21.5	21.7	21.9
Compact Cars	18.6	18.9	19.0	19.1	19.1	19.3	19.6	19.8	20.1	20.4
Midsize Cars	23.1	23.4	23.5	23.5	23.6	23.7	24.0	24.1	24.3	24.6
Large Cars	28.9	29.2	29.3	29.3	29.4	29.6	29.9	30.1	30.4	30.7
Two Seater Cars	31.9	32.3	32.3	32.4	32.4	32.6	32.8	33.0	33.2	33.4
Small Pickup	17.8	18.1	18.2	18.2	18.3	18.4	18.6	18.8	19.0	19.2
Large Pickup	20.7	21.0	21.1	21.2	21.2	21.4	21.6	21.8	22.0	22.2
Small Van	23.5	23.8	23.8	23.9	23.9	24.1	24.3	24.5	24.7	24.9
Large Van	21.6	22.0	22.0	22.1	22.1	22.3	22.6	22.7	23.0	23.2
Small Utility	24.1	24.5	24.5	24.6	24.6	24.8	25.0	25.2	25.4	25.6
Large Utility	27.3	27.6	27.7	27.8	27.8	28.0	28.2	28.4	28.6	28.8
Electric										
Mini-compact Cars	45.5	46.0	46.5	46.9	47.3	46.5	45.3	45.4	44.8	44.3
Subcompact Cars	32.9	33.4	33.8	34.2	34.5	33.9	32.9	32.9	32.5	32.0
Compact Cars	31.5	32.0	32.4	32.8	33.1	32.5	31.5	31.5	31.0	30.5
Midsize Cars	26.3	26.8	27.3	27.8	28.2	27.4	26.2	26.2	25.6	25.1
Large Cars	45.1	45.8	46.3	46.8	47.4	46.5	44.5	44.0	42.8	41.7
Two Seater Cars	49.1	49.7	50.2	50.6	51.0	50.2	49.0	49.1	48.5	47.9
Small Pickup	31.9	32.5	33.0	33.5	34.0	33.4	32.3	32.4	32.0	31.5
Large Pickup	37.0	37.8	38.5	39.2	39.8	39.0	37.6	37.7	37.1	36.5
Small Van	38.4	39.1	39.7	40.2	40.8	40.1	38.8	39.0	38.5	38.0
Large Van	38.2	39.0	39.6	40.3	40.9	39.9	38.5	38.7	38.0	37.4
Small Utility	30.1	30.7	31.3	31.9	32.5	32.0	30.5	30.8	30.2	29.6
Large Utility	43.0	43.8	44.5	45.2	45.9	44.7	42.5	43.0	42.1	41.3
Diesel-Electric Hybrid										
Mini-compact Cars	30.7	30.9	30.9	30.8	30.8	30.7	30.5	30.6	30.6	30.6
Subcompact Cars	21.1	21.4	21.3	21.2	21.1	21.0	20.7	21.0	21.0	20.9
Compact Cars	18.2	18.4	18.4	18.3	18.2	18.1	17.8	18.1	18.1	18.1
Midsize Cars	22.1	22.3	22.3	22.2	22.2	22.1	21.8	22.0	22.0	22.0
Large Cars	29.9	30.1	30.0	30.0	29.9	29.8	29.4	29.7	29.6	29.6
Two Seater Cars	32.7	33.0	32.9	32.9	32.8	32.8	32.6	32.8	32.8	32.8
Small Pickup	19.9	20.1	20.1	20.0	20.0	19.8	19.7	19.7	19.7	19.6
Large Pickup	24.2	24.4	24.3	24.2	24.2	23.9	23.7	23.7	23.6	23.5
Small Van	24.9	25.1	24.9	24.8	24.6	24.4	24.0	24.2	24.0	23.9
Large Van	25.2	25.4	25.3	25.2	25.2	25.0	24.7	24.7	24.6	24.5
Small Utility	24.8	25.0	24.8	24.7	24.6	24.4	23.9	24.1	23.9	23.8
Large Utility	31.4	31.5	31.4	31.1	31.0	30.6	29.9	30.1	29.8	29.5
Gasoline-Electric Hybrid										
Mini-compact Cars	29.5	29.8	29.7	29.7	29.7	29.6	29.5	29.6	29.6	29.6
Subcompact Cars	18.9	19.1	19.1	19.1	19.1	19.0	18.9	19.1	19.1	19.1
Compact Cars	16.2	16.5	16.5	16.5	16.4	16.4	16.4	16.6	16.7	16.7
Midsize Cars	20.9	21.2	21.2	21.1	21.1	21.0	20.9	21.0	21.0	21.1
Large Cars	27.0	27.3	27.2	27.3	27.3	27.2	27.0	27.2	27.2	27.2
Two Seater Cars	31.4	31.7	31.7	31.7	31.6	31.6	31.5	31.6	31.7	31.7
Small Pickup	18.5	18.7	18.6	18.5	18.5	18.2	17.7	17.6	17.3	17.0
Large Pickup	23.0	23.1	23.0	22.9	22.7	22.4	21.7	21.6	21.2	20.8
Small Van	22.2	22.4	22.3	22.3	22.2	22.1	21.8	21.9	21.9	21.8
Large Van	24.0	24.2	24.1	24.1	24.0	23.9	23.6	23.7	23.6	23.5
Small Utility	22.7	23.0	22.9	22.9	22.8	22.7	22.5	22.6	22.6	22.5
Large Utility	28.3	28.4	28.3	28.2	28.1	27.9	27.3	27.5	27.3	27.1
Fuel Cell Methanol										
Mini-compact Cars	0.0	0.0	76.0	69.2	63.3	49.8	37.5	31.7	25.3	20.2
Subcompact Cars	0.0	0.0	61.7	55.7	50.6	38.9	28.0	22.9	17.5	13.5
Compact Cars	0.0	0.0	61.2	55.1	49.8	37.8	26.6	21.3	16.0	12.0
Midsize Cars	0.0	0.0	72.8	65.7	59.5	45.4	32.4	26.3	20.0	15.2
Large Cars	0.0	0.0	83.5	75.6	68.9	53.5	39.1	32.3	25.0	19.4
Two Seater Cars	0.0	0.0	79.6	72.5	66.4	52.5	39.7	33.7	27.0	21.7
Small Pickup	0.0	0.0	71.6	64.1	57.6	43.0	29.0	22.2	16.0	11.5
Large Pickup	0.0	0.0	91.4	81.7	73.4	54.3	35.9	27.0	19.1	13.4
Small Van	0.0	0.0	84.5	76.0	68.7	52.2	36.3	28.6	21.2	15.7
Large Van	0.0	0.0	93.9	83.8	75.0	55.3	36.8	27.9	19.9	14.1

**Table 57. New Light-Duty Vehicle Prices
(Thousands 1990 Dollars)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Small Utility	0.0	0.0	82.9	74.8	67.7	51.7	36.3	29.0	21.7	16.2
Large Utility	0.0	0.0	102.5	92.0	83.0	62.4	43.2	34.0	25.1	18.5
Fuel Cell Hydrogen										
Mini-compact Cars	0.0	0.0	66.1	61.4	57.3	47.9	39.4	35.4	30.5	26.2
Subcompact Cars	0.0	0.0	53.6	49.5	45.9	37.8	30.3	26.7	22.5	18.9
Compact Cars	0.0	0.0	52.8	48.6	44.9	36.5	28.8	25.1	20.8	17.3
Midsize Cars	0.0	0.0	62.1	57.2	52.9	43.2	34.1	29.9	24.9	20.7
Large Cars	0.0	0.0	71.2	65.7	61.1	50.4	40.4	35.7	30.0	25.2
Two Seater Cars	0.0	0.0	69.1	64.3	60.0	50.4	41.5	37.4	32.2	27.7
Small Pickup	0.0	0.0	59.8	54.6	50.1	40.0	30.3	25.6	20.5	16.4
Large Pickup	0.0	0.0	74.5	67.7	62.0	48.7	36.0	29.8	23.3	18.3
Small Van	0.0	0.0	70.4	64.6	59.5	48.1	37.0	31.7	25.8	20.9
Large Van	0.0	0.0	76.4	69.4	63.4	49.7	36.9	30.8	24.2	19.0
Small Utility	0.0	0.0	69.5	63.9	59.0	48.0	37.3	32.2	26.4	21.6
Large Utility	0.0	0.0	84.2	76.9	70.6	56.4	43.1	36.7	29.6	23.9
Fuel Cell Gasoline										
Mini-compact Cars	0.0	0.0	83.6	75.7	68.9	53.3	39.1	32.5	25.4	19.8
Subcompact Cars	0.0	0.0	68.3	61.5	55.5	42.1	29.5	23.6	17.6	13.2
Compact Cars	0.0	0.0	68.1	61.0	54.9	41.0	28.1	22.0	16.1	11.8
Midsize Cars	0.0	0.0	80.7	72.5	65.4	49.2	34.1	27.1	20.1	14.9
Large Cars	0.0	0.0	92.3	83.2	75.4	57.7	41.1	33.2	25.1	19.1
Two Seater Cars	0.0	0.0	87.4	79.3	72.3	56.2	41.5	34.5	27.1	21.2
Small Pickup	0.0	0.0	80.1	71.4	64.0	47.2	30.9	23.1	16.2	11.4
Large Pickup	0.0	0.0	102.5	91.4	81.7	59.7	38.4	28.2	19.4	13.4
Small Van	0.0	0.0	94.1	84.3	75.9	56.9	38.5	29.7	21.4	15.5
Large Van	0.0	0.0	105.3	93.6	83.5	60.8	39.4	29.2	20.2	14.0
Small Utility	0.0	0.0	92.2	82.8	74.7	56.2	38.5	30.0	21.9	16.0
Large Utility	0.0	0.0	114.3	102.2	91.8	68.0	45.9	35.2	25.4	18.3

Sources: 1999 derived using: Energy and Environmental Analysis Inc., Updates to the Fuel Economy Model, prepared for Energy Information Administration (EIA) (Washington, DC, June 1998); and EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.
Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

**Table 58. New Light-Duty Vehicle Range
(Miles)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Gasoline										
Mini-compact Cars	467	468	471	473	474	481	486	490	495	500
Subcompact Cars	497	499	503	508	515	532	534	536	537	539
Compact Cars	479	479	480	484	488	502	502	501	501	500
Midsized Cars	486	487	489	493	497	509	510	512	514	515
Large Cars	517	518	520	523	528	549	552	552	554	556
Two Seater Cars	456	457	459	462	464	474	479	482	486	490
Small Pickup	448	445	445	445	447	457	471	483	497	511
Large Pickup	436	434	435	438	441	453	469	484	499	516
Small Van	528	524	523	524	526	539	557	576	595	615
Large Van	484	484	486	491	496	516	534	552	571	591
Small Utility	429	427	427	427	430	442	457	468	482	497
Large Utility	520	519	521	526	533	555	576	594	614	635
Turbo Direct Injection Diesel										
Mini-compact Cars	630	632	636	638	640	650	657	662	668	675
Subcompact Cars	671	674	680	685	695	719	721	723	725	728
Compact Cars	647	647	648	654	658	678	677	677	676	675
Midsized Cars	656	658	660	665	671	687	688	692	694	696
Large Cars	698	700	703	706	713	741	745	746	748	750
Two Seater Cars	616	617	620	623	626	640	646	651	656	662
Small Pickup	604	601	601	601	603	618	635	653	671	690
Large Pickup	589	586	587	591	595	612	633	653	674	696
Small Van	713	707	707	707	710	728	752	777	804	831
Large Van	654	653	655	662	670	697	721	745	771	798
Small Utility	579	576	576	577	580	596	617	632	651	670
Large Utility	702	700	703	710	719	750	778	802	829	858
Methanol										
Mini-compact Cars	294	295	297	298	299	303	306	309	312	315
Subcompact Cars	313	315	317	320	324	335	336	337	339	340
Compact Cars	302	302	302	305	307	317	316	316	315	315
Midsized Cars	306	307	308	310	313	321	321	323	324	325
Large Cars	326	327	328	330	333	346	348	348	349	350
Two Seater Cars	287	288	289	291	292	299	302	304	306	309
Small Pickup	282	280	280	280	281	288	297	305	313	322
Large Pickup	275	273	274	276	278	286	295	305	315	325
Small Van	333	330	330	330	331	340	351	363	375	388
Large Van	305	305	306	309	313	325	336	348	360	372
Small Utility	270	269	269	269	271	278	288	295	304	313
Large Utility	328	327	328	331	336	350	363	374	387	400
Methanol Flex										
Mini-compact Cars	266	267	269	270	270	274	277	280	282	285
Subcompact Cars	283	285	287	289	293	303	304	305	306	307
Compact Cars	273	273	273	276	278	286	286	286	285	285
Midsized Cars	277	278	279	281	283	290	290	292	293	294
Large Cars	295	296	297	298	301	313	315	315	316	317
Two Seater Cars	260	260	262	263	264	270	273	275	277	279
Small Pickup	255	254	254	254	255	261	268	276	283	291
Large Pickup	249	247	248	250	251	258	267	276	285	294
Small Van	301	298	298	299	300	307	317	328	339	351
Large Van	276	276	277	280	283	294	304	315	326	337
Small Utility	244	243	243	244	245	252	260	267	275	283
Large Utility	296	296	297	300	304	316	328	339	350	362
Ethanol										
Mini-compact Cars	355	356	358	359	361	366	370	373	376	380
Subcompact Cars	378	379	383	386	391	405	406	407	408	410
Compact Cars	364	364	365	368	371	382	381	381	381	380
Midsized Cars	369	370	372	374	378	387	387	389	390	392
Large Cars	393	394	396	398	402	417	420	420	421	422
Two Seater Cars	347	347	349	351	353	360	364	366	369	372
Small Pickup	340	338	338	338	340	348	358	367	378	388

**Table 58. New Light-Duty Vehicle Range
(Miles)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Large Pickup	331	330	331	333	335	345	356	368	380	392
Small Van	401	398	398	398	400	410	423	438	452	468
Large Van	368	368	369	373	377	392	406	420	434	449
Small Utility	326	325	324	325	326	336	347	356	367	377
Large Utility	395	394	396	400	405	422	438	451	467	483
Ethanol Flex										
Mini-compact Cars	341	342	344	345	346	351	355	358	361	365
Subcompact Cars	363	365	367	371	376	389	390	391	392	394
Compact Cars	350	350	350	353	356	367	366	366	366	365
Midsized Cars	355	356	357	360	363	372	372	374	375	376
Large Cars	378	378	380	382	386	401	403	403	404	406
Two Seater Cars	333	333	335	337	339	346	349	352	355	358
Small Pickup	327	325	325	325	326	334	344	353	363	373
Large Pickup	318	317	318	320	322	331	342	353	365	377
Small Van	386	382	382	382	384	394	407	420	435	449
Large Van	354	353	354	358	362	377	390	403	417	431
Small Utility	313	312	311	312	314	322	334	342	352	363
Large Utility	380	379	380	384	389	405	421	434	448	464
Compressed Natural Gas (CNG)										
Mini-compact Cars	280	281	283	284	285	289	292	294	297	300
Subcompact Cars	298	300	302	305	309	319	320	321	322	323
Compact Cars	288	287	288	290	293	301	301	301	300	300
Midsized Cars	292	292	294	296	298	306	306	307	308	309
Large Cars	310	311	312	314	317	329	331	331	332	333
Two Seater Cars	274	274	276	277	278	285	287	289	292	294
Small Pickup	269	267	267	267	268	274	282	290	298	307
Large Pickup	262	260	261	263	265	272	281	290	300	310
Small Van	317	314	314	314	315	323	334	346	357	369
Large Van	291	290	291	294	298	310	320	331	343	354
Small Utility	257	256	256	256	258	265	274	281	289	298
Large Utility	312	311	312	316	320	333	346	356	369	381
CNG Bi-Fuel										
Mini-compact Cars	233	234	236	236	237	241	243	245	248	250
Subcompact Cars	249	250	252	254	257	266	267	268	269	270
Compact Cars	240	240	240	242	244	251	251	251	250	250
Midsized Cars	243	244	245	246	249	255	255	256	257	258
Large Cars	259	259	260	262	264	274	276	276	277	278
Two Seater Cars	228	228	230	231	232	237	239	241	243	245
Small Pickup	224	223	223	223	223	229	235	242	249	255
Large Pickup	218	217	218	219	220	227	234	242	250	258
Small Van	264	262	262	262	263	270	278	288	298	308
Large Van	242	242	243	245	248	258	267	276	286	295
Small Utility	214	213	213	214	215	221	228	234	241	248
Large Utility	260	259	260	263	266	278	288	297	307	318
Liquefied Petroleum Gas (LPG)										
Mini-compact Cars	397	398	401	402	403	409	413	417	421	425
Subcompact Cars	423	424	428	432	438	452	454	455	457	458
Compact Cars	407	407	408	412	415	427	426	426	426	425
Midsized Cars	413	414	416	419	423	433	433	435	437	438
Large Cars	440	441	442	445	449	467	469	469	471	472
Two Seater Cars	388	388	391	392	394	403	407	410	413	417
Small Pickup	381	378	378	378	380	389	400	411	422	434
Large Pickup	371	369	370	372	375	385	398	411	425	438
Small Van	449	445	445	445	447	458	473	490	506	523
Large Van	412	411	413	417	422	439	454	469	485	502
Small Utility	365	363	363	363	365	375	388	398	410	422
Large Utility	442	441	443	447	453	472	490	505	522	540
LPG Bi-Fuel										
Mini-compact Cars	373	375	377	378	379	385	389	392	396	400

**Table 58. New Light-Duty Vehicle Range
(Miles)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Subcompact Cars	398	399	403	406	412	426	427	429	430	431
Compact Cars	383	383	384	387	390	402	401	401	401	400
Midsize Cars	389	390	391	394	398	407	408	410	411	412
Large Cars	414	415	416	419	423	439	442	442	443	445
Two Seater Cars	365	365	368	369	371	379	383	386	389	392
Small Pickup	358	356	356	356	357	366	377	387	398	409
Large Pickup	349	347	348	350	353	363	375	387	400	413
Small Van	423	419	419	419	421	431	446	461	476	492
Large Van	387	387	388	392	397	413	427	442	457	473
Small Utility	343	342	341	342	344	353	365	375	386	397
Large Utility	416	415	417	421	426	444	461	475	492	508
Electric										
Mini-compact Cars	80	80	80	80	80	80	80	80	80	80
Subcompact Cars	80	80	80	80	80	80	80	80	80	80
Compact Cars	80	80	80	80	80	80	80	80	80	80
Midsize Cars	80	80	80	80	80	80	80	80	80	80
Large Cars	80	80	80	80	80	80	80	80	80	80
Two Seater Cars	80	80	80	80	80	80	80	80	80	80
Small Pickup	80	80	80	80	80	80	80	80	80	80
Large Pickup	80	80	80	80	80	80	80	80	80	80
Small Van	80	80	80	80	80	80	80	80	80	80
Large Van	80	80	80	80	80	80	80	80	80	80
Small Utility	80	80	80	80	80	80	80	80	80	80
Large Utility	80	80	80	80	80	80	80	80	80	80
Diesel-Electric Hybrid										
Mini-compact Cars	607	609	613	615	617	626	632	638	644	650
Subcompact Cars	646	649	654	660	669	692	694	696	699	701
Compact Cars	623	623	624	629	634	653	652	652	651	650
Midsize Cars	632	634	636	640	646	662	663	666	668	670
Large Cars	673	674	677	680	687	714	718	718	720	722
Two Seater Cars	593	594	597	600	603	616	622	627	632	637
Small Pickup	582	579	579	579	581	595	612	628	646	664
Large Pickup	567	564	566	569	573	589	609	629	649	671
Small Van	687	681	680	681	684	701	724	749	774	800
Large Van	630	629	631	638	645	671	694	718	742	768
Small Utility	558	555	555	555	558	574	594	609	627	646
Large Utility	676	674	677	684	693	722	749	772	799	826
Gasoline-Electric Hybrid										
Mini-compact Cars	583	585	589	591	593	602	608	613	619	625
Subcompact Cars	622	624	629	635	643	665	667	670	672	674
Compact Cars	599	599	600	605	610	628	627	627	626	625
Midsize Cars	608	609	611	616	621	637	637	640	642	644
Large Cars	647	648	651	654	660	686	690	690	692	695
Two Seater Cars	570	571	574	577	580	593	598	603	608	613
Small Pickup	560	556	556	556	558	572	588	604	621	639
Large Pickup	545	543	544	547	551	567	586	604	624	645
Small Van	660	655	654	655	657	674	696	720	744	769
Large Van	605	605	607	613	621	645	667	690	714	738
Small Utility	536	534	533	534	537	552	571	585	603	621
Large Utility	650	648	651	658	666	694	720	742	768	794
Fuel Cell Methanol										
Mini-compact Cars	467	468	471	473	474	481	486	490	495	500
Subcompact Cars	497	499	503	508	515	532	534	536	537	539
Compact Cars	479	479	480	484	488	502	502	501	501	500
Midsize Cars	486	487	489	493	497	509	510	512	514	515
Large Cars	517	518	520	523	528	549	552	552	554	556
Two Seater Cars	456	457	459	462	464	474	479	482	486	490
Small Pickup	448	445	445	445	447	457	471	483	497	511
Large Pickup	436	434	435	438	441	453	469	484	499	516
Small Van	528	524	523	524	526	539	557	576	595	615
Large Van	484	484	486	491	496	516	534	552	571	591

**Table 58. New Light-Duty Vehicle Range
(Miles)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Small Utility	429	427	427	427	430	442	457	468	482	497
Large Utility	520	519	521	526	533	555	576	594	614	635
Fuel Cell Hydrogen										
Mini-compact Cars	467	468	471	473	474	481	486	490	495	500
Subcompact Cars	497	499	503	508	515	532	534	536	537	539
Compact Cars	479	479	480	484	488	502	502	501	501	500
Midsize Cars	486	487	489	493	497	509	510	512	514	515
Large Cars	517	518	520	523	528	549	552	552	554	556
Two Seater Cars	456	457	459	462	464	474	479	482	486	490
Small Pickup	448	445	445	445	447	457	471	483	497	511
Large Pickup	436	434	435	438	441	453	469	484	499	516
Small Van	528	524	523	524	526	539	557	576	595	615
Large Van	484	484	486	491	496	516	534	552	571	591
Small Utility	429	427	427	427	430	442	457	468	482	497
Large Utility	520	519	521	526	533	555	576	594	614	635
Fuel Cell Gasoline										
Mini-compact Cars	467	468	471	473	474	481	486	490	495	500
Subcompact Cars	497	499	503	508	515	532	534	536	537	539
Compact Cars	479	479	480	484	488	502	502	501	501	500
Midsize Cars	486	487	489	493	497	509	510	512	514	515
Large Cars	517	518	520	523	528	549	552	552	554	556
Two Seater Cars	456	457	459	462	464	474	479	482	486	490
Small Pickup	448	445	445	445	447	457	471	483	497	511
Large Pickup	436	434	435	438	441	453	469	484	499	516
Small Van	528	524	523	524	526	539	557	576	595	615
Large Van	484	484	486	491	496	516	534	552	571	591
Small Utility	429	427	427	427	430	442	457	468	482	497
Large Utility	520	519	521	526	533	555	576	594	614	635

Sources: 1999 derived using: Energy and Environmental Analysis Inc., Updates to the Fuel Economy Model, prepared for Energy Information Administration (EIA) (Washington, DC, June 1998); and EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.
Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

**Table 72. Electric Power Projections for EMM Region
Unites States Total**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Electricity Generating Capability 1/ (gigawatts)										
Coal Steam	303.29	300.64	300.91	305.81	312.62	315.00	315.33	316.38	317.07	317.76
Other Fossil Steam 2/	133.25	131.57	128.47	126.90	123.37	120.35	117.30	116.13	114.08	112.07
Combined Cycle	27.13	34.41	49.52	66.52	80.92	126.02	181.30	229.07	308.83	416.36
Combustion Turbine/Diesel	107.07	112.23	130.60	135.94	150.96	164.12	184.59	210.70	238.73	270.49
Nuclear Power	97.48	97.48	97.48	97.48	96.72	93.73	79.52	71.58	62.56	54.67
Pumped Storage/Other 3/	19.44	19.48	19.48	19.48	19.48	19.48	19.48	19.48	19.48	19.48
Fuel Cells	0.00	0.01	0.01	0.02	0.04	0.15	0.27	0.29	0.41	0.57
Renewable Sources 4/	90.24	91.26	92.11	92.77	93.60	95.44	96.55	97.04	97.85	98.67
Total Capability	778.31	788.12	820.57	847.68	881.56	940.29	1003.20	1073.37	1146.81	1225.28
Cumulative Planned Additions 5/										
Coal Steam	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Other Fossil Steam 2/	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08		
Combined Cycle	6.86	8.34	8.34	8.34	8.34	8.34	8.34	8.34		
Combustion Turbine/Diesel	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70		
Nuclear Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Pumped Storage/Other 3/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Fuel Cells	0.00	0.01	0.01	0.02	0.04	0.15	0.27	0.29		
Renewable Sources 4/	1.81	2.15	2.41	2.71	3.08	4.29	5.14	5.36		
Total Planned Additions	9.46	11.28	11.54	11.86	12.24	13.56	14.53	14.77		
Cumulative Unplanned Additions 5/										
Coal Steam	0.00	0.00	2.40	7.43	14.88	18.51	19.54	21.81		
Other Fossil Steam 2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Combined Cycle	0.00	5.81	20.92	37.91	52.32	97.47	152.75	200.51		
Combustion Turbine/Diesel	32.37	39.10	58.31	63.85	79.21	93.14	114.31	140.51		
Nuclear Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Pumped Storage/Other 3/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Fuel Cells	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Renewable Sources 4/	0.03	0.75	1.26	1.48	1.95	2.59	2.85	3.12		
Total Unplanned Additions	32.81	46.69	84.86	113.43	152.20	217.71	298.30	378.65		
Cumulative Total Additions	42.27	57.97	96.41	125.29	164.44	231.27	312.83	393.42		
Cumulative Retirements	12.36	18.92	25.06	26.96	32.22	40.32	58.97	69.40		
Cogenerators 6/ Capability										
Coal	8.89	8.90	8.90	8.90	8.90	8.90	8.90	8.89	8.89	8.89
Petroleum	2.65	2.65	2.65	2.64	2.64	2.64	2.64	2.64	2.64	2.64
Natural Gas	38.41	39.27	40.03	40.74	41.35	42.99	45.73	48.98	52.28	55.80
Other Gaseous Fuels	0.78	0.79	0.80	0.82	0.83	0.88	0.97	1.05	1.15	1.25
Renewable Sources 4/	6.56	6.74	6.94	7.16	7.37	7.97	8.76	9.45	10.28	11.19
Other	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03
Total	57.31	58.36	59.33	60.28	61.12	63.41	67.04	71.04	75.19	79.58
Electricity Demand (billion kilowatthours)										
Residential	1251.57	1283.36	1316.68	1339.75	1368.33	1453.62	1571.99	1694.93	1830.21	1976.30
Commercial/Other	1210.43	1239.54	1272.51	1303.91	1337.48	1430.53	1558.04	1642.08	1759.31	1884.91
Industrial	1121.25	1128.64	1143.95	1164.37	1180.19	1225.23	1307.93	1409.72	1512.14	1622.00
Transportation	19.15	21.23	23.17	24.91	26.45	31.13	37.62	35.46	37.84	40.39
Total Sales	3602.40	3672.79	3756.31	3832.94	3912.45	4140.51	4475.58	4782.19	5139.41	5523.31
Net Energy for Load (billion kilowatthours) 7/										
Gross International Imports	66.90	65.95	68.72	67.13	61.91	45.49	32.63	28.60	22.68	17.98
Gross International Exports	12.75	16.55	16.67	16.80	16.93	16.38	11.53	7.66	5.24	3.58
Gross Interregional Electricity Imports	317.46	324.39	322.62	315.13	309.47	282.31	237.18	204.50	174.06	148.14
Gross Interregional Electricity Exports	321.31	328.52	326.86	319.42	313.68	286.21	241.26	209.00	178.60	152.62
Purchases from Cogenerators 6/	165.16	167.19	168.41	168.81	169.30	173.80	184.61	197.85	211.09	225.22
Utility Generation for Customers	3637.32	3713.49	3794.77	3873.59	3960.72	4208.11	4551.12	4862.05	5226.19	5617.61
Total Net Energy for Load	3852.77	3925.94	4010.98	4088.43	4170.79	4407.12	4752.75	5076.34	5448.15	5847.18
Generation by Fuel Type										

**Table 72. Electric Power Projections for EMM Region
United States Total**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
(billion kilowatthours)										
Coal	2028.84	2051.18	2084.79	2109.93	2166.90	2195.99	2246.33	2298.01	2350.79	2404.77
Petroleum	47.03	40.64	31.96	26.25	21.89	16.92	17.20	18.58	19.46	20.40
Natural Gas	485.07	536.72	584.38	637.30	668.86	899.50	1266.39	1586.86	2107.69	2799.45
Nuclear	737.77	738.94	740.10	741.24	738.41	720.28	638.96	574.26	512.76	457.85
Pumped Storage/Other 3/	-0.92	-0.92	-0.92	-0.92	-0.92	-0.92	-0.92	-0.92	-0.92	-0.92
Renewable Sources 4/	355.67	362.91	370.11	375.10	380.04	389.80	395.35	395.71	398.69	401.70
Total Generation	3653.63	3729.91	3811.29	3890.10	3976.85	4224.19	4567.18	4878.06	5242.01	5633.13
Sales to Customers	3637.32	3713.49	3794.77	3873.59	3960.72	4208.11	4551.12	4862.05	5226.19	5617.61
Generation for Own Use	16.31	16.42	16.51	16.51	16.13	16.09	16.06	16.01	15.97	15.93
Cogenerators										
Coal	51.04	51.76	52.49	52.48	52.46	52.41	52.32	52.27	52.20	52.13
Petroleum	9.84	9.76	9.74	9.65	9.64	9.70	9.85	10.00	10.15	10.30
Natural Gas	228.85	234.75	238.99	242.90	245.97	256.53	275.74	298.86	322.58	348.18
Other Gaseous Fuels	6.15	6.20	6.26	6.40	6.47	6.84	7.48	8.06	8.74	9.48
Renewable Sources 4/	36.60	37.51	38.55	39.68	40.80	43.93	48.47	52.43	57.28	62.58
Other	5.44	5.44	5.44	5.44	5.45	5.46	5.47	5.49	5.51	5.52
Total	337.91	345.42	351.48	356.56	360.80	374.87	399.33	427.10	455.89	486.62
Sales to Utilities	165.16	167.19	168.41	168.81	169.30	173.80	184.61	197.85	211.09	225.22
Generation for Own Use	172.75	178.23	183.07	187.75	191.50	201.07	214.72	229.25	244.80	261.39
End-Use Prices (1999 cents per kilowatthour)										
Residential	7.7	7.6	7.5	7.5	7.5	7.5	7.5	7.6	7.61	7.67
Commercial	7.1	7.0	6.7	6.5	6.3	6.0	6.0	6.2	6.27	6.35
Industrial	4.4	4.4	4.2	4.1	4.0	3.8	3.8	4.0	4.03	4.10
Transportation	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.39	4.32
All Sectors Average	6.4	6.4	6.2	6.1	6.0	5.9	5.9	6.0	6.07	6.14
Prices by Service Category (1999 cents per kilowatthour)										
Generation	3.9	3.8	3.6	3.5	3.3	3.2	3.2	3.4	3.51	3.63
Transmission	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.66	0.64
Distribution	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.94	1.91
Fuel Consumption (quadrillion Btu) 8/										
Coal	20.85	21.09	21.40	21.62	22.14	22.41	22.94	23.46	23.99	24.54
Natural Gas	4.97	5.33	5.43	5.60	5.67	7.03	9.42	11.48	14.68	18.76
Oil	0.48	0.41	0.32	0.26	0.21	0.16	0.16	0.18	0.19	0.20
Total	26.30	26.83	27.16	27.47	28.02	29.60	32.53	35.12	38.24	41.65
Emissions (million short tons) 9/										
Total Carbon	678.34	689.14	697.71	704.87	719.88	748.38	801.69	850.25	906.26	965.97
Carbon Dioxide	2487.24	2526.85	2558.27	2584.54	2639.56	2744.07	2939.54	3117.56	3322.96	3541.89
Sulfur Dioxide	10.92	10.50	10.30	9.90	9.74	9.28	9.33	8.95	8.79	8.63
Nitrogen Oxide	4.42	4.27	4.25	4.22	4.22	4.22	4.33	4.42	4.53	4.64

1/ Net 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. Includes electric utilities, small power producers, and exempt wholesale generators. Nameplate capacity is reported for nonutilities on Form EIA-860B, "Annual Electric Generator Report - Nonutility." Nameplate capacity is designated by the manufacturer. The nameplate capacity has been converted to net summer capacity based on historic relationships.

2/ Includes oil-, gas-, and dual-fired capability.

3/ Other includes methane, propane gas, and blast furnace gas for utilities; and hydrogen, sulfur, batteries, chemicals, fish oil, and spent sulfite liquor.

4/ Includes conventional hydroelectric, geothermal, wood, wood waste, municipal solid waste, other biomass, solar thermal, photovoltaics, and wind power.

5/ Cumulative additions after December 31, 1999.

6/ Cogenerators produce electricity and other useful thermal energy (such as steam or heat) through the sequential use of energy.

7/ Generation to meet system load by source.

8/ Includes fuel consumption by electric utilities, small power producers, independent power producers, and exempt wholesale generators.

9/ Estimated emissions from utilities and nonutilities (excluding cogenerators).

O&M = Operation and maintenance.

EMM = Electricity market module.

N/A = Not applicable.

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

Sources: 1999 (except for prices and nonutility data): Energy Information Administration (EIA), Annual Energy Review 1999, DOE/EIA-0384(99) (Washington, DC, July 2000). Other 1999 and projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

**Table 75. Renewable Resources Consumption/Displacement by Source for Electricity
(Trillion Btu)**

	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
United States										
Conventional Hydropower	3071.81	3073.22	3074.22	3078.37	3078.09	3073.61	3068.04	3062.84	3057.47	3052.10
Geothermal 1/	386.52	388.45	455.35	500.71	603.77	741.30	768.65	773.89	790.73	807.92
Municipal Solid Waste	268.07	346.05	373.25	377.04	382.27	409.38	448.81	463.46	493.12	524.68
Biomass 2/	127.12	134.25	153.92	173.01	176.19	192.41	206.85	197.35	199.87	202.42
Solar Thermal 3/	9.32	9.66	9.86	10.04	10.43	11.38	12.73	14.06	15.63	17.37
Solar Photovoltaic 3/	1.13	1.57	2.09	2.67	3.21	5.25	9.45	13.98	22.81	37.22
Wind	85.63	91.27	96.86	102.85	109.19	126.75	131.99	134.69	138.85	143.13

1/ Includes hydrothermal resources only (hot water and steam).

2/ Include projections for energy crops beginning in 2010.

3/ Grid connected generation only.

Btu = British thermal unit.

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

Source: Energy Information Administration, AEO2001 National Energy Modeling System run AEO2001.D101600A.

**Table A17. Renewable Energy Generating Capability and Generation
(Gigawatts, Unless Otherwise Noted)**

	2002	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Electric Generators (excluding cogenerators) 1/											
Net Summer Capability											
Conventional Hydropower	78.36	78.47	78.54	78.62	78.76	78.76	78.74	78.74	78.74	78.74	78.74
Geothermal 2/	2.93	2.93	2.88	3.15	3.34	3.79	4.34	4.41	4.41	4.44	4.47
Municipal Solid Waste 3/	2.78	2.81	3.54	3.80	3.84	3.90	4.20	4.57	4.72	5.00	5.30
Wood and Other Biomass 4/	1.60	1.62	1.66	1.68	1.71	1.76	2.04	2.33	2.37	2.56	2.76
Solar Thermal	0.33	0.34	0.35	0.35	0.36	0.37	0.40	0.44	0.48	0.52	0.57
Solar Photovoltaic	0.03	0.05	0.06	0.09	0.11	0.13	0.21	0.37	0.54	0.88	1.42
Wind	3.80	4.01	4.22	4.43	4.65	4.89	5.51	5.70	5.78	5.92	6.07
Total	89.84	90.24	91.26	92.11	92.77	93.60	95.44	96.55	97.04	97.85	98.67
Generation (billion kilowatthours)											
Conventional Hydropower	298.48	298.81	298.95	299.05	299.45	299.43	298.99	298.45	297.94	297.42	296.90
Geothermal 2/	13.59	13.60	13.56	15.86	17.36	20.89	25.27	25.81	25.83	26.11	26.40
Municipal Solid Waste 3/	19.44	19.64	25.36	27.35	27.63	28.01	30.00	32.88	33.96	36.13	38.44
Wood and Other Biomass 4/	17.06	14.27	15.07	17.27	19.41	19.77	21.59	23.21	22.15	22.43	22.72
Dedicated Plants	8.08	8.29	8.50	8.67	8.85	9.15	10.88	12.99	13.35	14.78	16.37
Cofiring	8.98	5.98	6.57	8.61	10.56	10.62	10.71	10.22	8.80	7.97	7.23
Solar Thermal	0.90	0.91	0.94	0.96	0.98	1.01	1.11	1.24	1.37	1.52	1.69
Solar Photovoltaic	0.07	0.11	0.15	0.20	0.26	0.31	0.51	0.92	1.36	2.22	3.62
Wind	7.73	8.33	8.88	9.42	10.00	10.62	12.33	12.84	13.10	13.51	13.92
Total	357.25	355.67	362.91	370.11	375.10	380.04	389.80	395.35	395.71	398.69	401.70
Cogenerators 5/											
Net Summer Capability											
Municipal Solid Waste	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Biomass	4.65	4.83	4.99	5.17	5.36	5.55	6.06	6.85	7.54	8.40	9.37
Total	5.35	5.53	5.69	5.87	6.06	6.24	6.76	7.55	8.23	9.09	10.03
Generation (billion kilowatthours)											
Municipal Solid Waste	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03
Biomass	27.06	28.05	28.92	29.92	30.99	32.05	35.01	39.55	43.52	48.53	54.11
Total	31.08	32.08	32.95	33.95	35.02	36.07	39.03	43.58	47.55	52.48	57.93
Other End-Use Generators 6/											
Net Summer Capability											
Conventional Hydropower 7/	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar Photovoltaic	0.03	0.05	0.07	0.10	0.13	0.17	0.35	0.35	0.35	0.35	0.35
Total	1.02	1.04	1.06	1.09	1.12	1.16	1.34	1.34	1.34	1.34	1.34
Generation (billion kilowatthours)											
Conventional Hydropower 7/	4.44	4.44	4.44	4.44	4.44	4.43	4.43	4.42	4.41	4.41	4.40
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar Photovoltaic	0.06	0.09	0.15	0.20	0.28	0.37	0.75	0.75	0.75	0.75	0.75
Total	4.51	4.54	4.58	4.64	4.72	4.80	5.18	5.18	5.17	5.01	5.01

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

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

3/ Includes landfill gas.

4/ Includes projections for energy crops after 2010.

5/ Cogenerators produce electricity and other useful thermal energy.

6/ Includes small on-site generating systems in the residential, commercial, and industrial sectors used primarily for own-use generation, but which may also sell some power to the grid. Excludes off-grid photovoltaics and other generators not connected to the distribution or transmission systems.

7/ Represents own-use industrial hydroelectric power.

N/A = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 1998 and 1999 are model results and may differ slightly from official EIA data reports. Net summer capability has been estimated for nonutility generators for AEO2001. Net summer capability is used to be consistent with electric utility capacity estimates. Additional retirements are determined on the basis of the size and age of the units.

Sources: 1998 and 1999 electric utility capability: Energy Information Administration (EIA), Form EIA-860A: "Annual Electric Generator Report - Utility." 1998 and 1999 nonutility and cogenerator capability: EIA, Form EIA-860B: "Annual Electric Generator Report - Nonutility." 1998 and 1999 generation: EIA, Annual Energy Review 1999, DOE/EIA-0384(99) (Washington, DC, July 2000). Projections: EIA, AEO2001 National Energy Modeling System run AEO2001.D101600A.

GDP Implicit Price Deflators

Year	GDP Chain-Type Price Index	
	(1996=1.000)	(1999=1.000)
1998	1.029	0.985
1999	1.045	1.000
2000	1.068	1.022
2001	1.091	1.044
2002	1.112	1.064
2003	1.136	1.087
2004	1.161	1.111
2005	1.186	1.135
2006	1.210	1.158
2007	1.233	1.180
2008	1.257	1.203
2009	1.280	1.225
2010	1.304	1.248
2011	1.328	1.271
2012	1.352	1.294
2013	1.379	1.319
2014	1.407	1.347
2015	1.440	1.378
2016	1.477	1.414
2017	1.519	1.454
2018	1.567	1.499
2019	1.620	1.551
2020	1.680	1.608
2021	1.723	1.649
2022	1.767	1.692
2023	1.813	1.735
2024	1.859	1.780
2025	1.907	1.825
2026	1.956	1.872
2027	2.007	1.921
2028	2.058	1.970
2029	2.111	2.020
2030	2.165	2.072

Source: AEO Table A20 for 1998-2020