

**Table I1. Total Energy Supply and Disposition Summary**  
(Quadrillion Btu per Year, Unless Otherwise Noted)

Supply, Disposition, and Prices	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Production</b>										
Crude Oil and Lease Condensate . . .	12.29	11.94	11.27	11.23	11.50	10.65	10.55	11.23	9.96	9.89
Natural Gas Plant Liquids . . . . .	2.65	3.12	2.96	3.01	3.53	3.10	3.24	3.70	3.05	3.06
Dry Natural Gas . . . . .	19.97	22.11	21.00	21.36	25.52	22.63	23.64	27.08	22.37	22.46
Coal . . . . .	23.97	25.69	25.79	23.23	27.83	30.06	13.89	29.61	32.86	11.85
Nuclear Power . . . . .	8.03	8.25	8.25	8.37	8.28	8.28	9.80	8.28	8.28	13.69
Renewable Energy <sup>1</sup> . . . . .	5.32	7.30	7.32	9.33	8.31	8.38	15.60	8.77	8.81	18.00
Other <sup>2</sup> . . . . .	0.57	0.85	0.84	0.76	0.79	0.77	0.48	0.80	0.73	0.45
<b>Total . . . . .</b>	<b>72.80</b>	<b>79.26</b>	<b>77.43</b>	<b>77.29</b>	<b>85.76</b>	<b>83.86</b>	<b>77.20</b>	<b>89.47</b>	<b>86.06</b>	<b>79.42</b>
<b>Imports</b>										
Crude Oil <sup>3</sup> . . . . .	20.26	25.09	25.64	25.59	27.63	28.46	27.87	28.62	29.78	29.02
Petroleum Products <sup>4</sup> . . . . .	5.04	6.32	6.69	5.93	11.72	12.31	9.39	14.79	16.73	11.94
Natural Gas . . . . .	4.18	5.43	5.79	5.76	7.41	7.80	8.37	8.44	7.63	7.95
Other Imports <sup>5</sup> . . . . .	0.71	0.92	0.94	0.84	0.95	0.93	1.10	0.93	0.93	0.86
<b>Total . . . . .</b>	<b>30.19</b>	<b>37.76</b>	<b>39.05</b>	<b>38.12</b>	<b>47.71</b>	<b>49.50</b>	<b>46.73</b>	<b>52.78</b>	<b>55.07</b>	<b>49.77</b>
<b>Exports</b>										
Petroleum <sup>6</sup> . . . . .	2.01	2.25	2.23	2.19	2.38	2.33	2.28	2.43	2.50	2.29
Natural Gas . . . . .	0.37	0.56	0.53	0.53	0.38	0.38	0.38	0.37	0.37	0.37
Coal . . . . .	1.27	0.86	0.86	0.83	0.74	0.74	0.67	0.62	0.61	0.62
<b>Total . . . . .</b>	<b>3.64</b>	<b>3.67</b>	<b>3.62</b>	<b>3.56</b>	<b>3.50</b>	<b>3.46</b>	<b>3.33</b>	<b>3.42</b>	<b>3.48</b>	<b>3.28</b>
<b>Discrepancy<sup>7</sup> . . . . .</b>	<b>2.06</b>	<b>0.22</b>	<b>0.25</b>	<b>0.41</b>	<b>0.23</b>	<b>0.21</b>	<b>0.15</b>	<b>0.20</b>	<b>0.17</b>	<b>0.09</b>
<b>Consumption</b>										
Petroleum Products <sup>8</sup> . . . . .	38.46	44.45	44.53	43.68	52.15	52.33	48.60	56.11	57.14	51.32
Natural Gas . . . . .	23.26	27.35	26.63	26.95	32.95	30.44	32.00	35.55	30.07	30.54
Coal . . . . .	22.02	25.47	25.56	22.65	27.88	30.11	13.79	29.86	33.11	11.86
Nuclear Power . . . . .	8.03	8.25	8.25	8.37	8.28	8.28	9.80	8.28	8.28	13.69
Renewable Energy <sup>1</sup> . . . . .	5.32	7.30	7.32	9.33	8.31	8.38	15.60	8.77	8.81	18.01
Other <sup>9</sup> . . . . .	0.21	0.31	0.33	0.46	0.17	0.15	0.65	0.06	0.07	0.39
<b>Total . . . . .</b>	<b>97.29</b>	<b>113.13</b>	<b>112.62</b>	<b>111.44</b>	<b>129.74</b>	<b>129.69</b>	<b>120.45</b>	<b>138.63</b>	<b>137.48</b>	<b>125.81</b>
<b>Net Imports - Petroleum . . . . .</b>	<b>23.29</b>	<b>29.16</b>	<b>30.10</b>	<b>29.33</b>	<b>36.97</b>	<b>38.43</b>	<b>34.98</b>	<b>40.98</b>	<b>44.02</b>	<b>38.67</b>
<b>Prices (2001 dollars per unit)</b>										
World Oil Price (dollars per barrel) <sup>10</sup> . .	22.01	23.99	23.99	23.77	25.48	25.48	24.15	26.57	26.57	24.58
Natural Gas Wellhead Price (dollars per thousand cubic feet) <sup>11</sup> . .	4.12	3.39	3.81	3.86	3.70	4.03	4.88	3.95	5.55	5.70
Coal Minemouth Price (dollars per ton)	17.59	15.06	15.08	15.91	14.34	14.84	16.51	14.39	15.19	15.80
Average Electricity Price (cents per kilowatt-hour) . . . . .	7.3	6.4	6.6	7.1	6.7	6.8	9.3	6.7	7.2	10.3

<sup>1</sup>Includes grid-connected electricity from conventional hydroelectric; wood and wood waste; landfill gas; municipal solid waste; other biomass; wind; photovoltaic and solar thermal sources; non-electric energy from renewable sources, such as active and passive solar systems, and wood; and both the ethanol and gasoline components of E85, but not the ethanol components of blends less than 85 percent. Excludes electricity imports using renewable sources and nonmarketed renewable energy. See Table I18 for selected nonmarketed residential and commercial renewable energy.

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

<sup>3</sup>Includes imports of crude oil for the Strategic Petroleum Reserve.

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

<sup>5</sup>Includes coal, coal coke (net), and electricity (net).

<sup>6</sup>Includes crude oil and petroleum products.

<sup>7</sup>Balancing item. Includes unaccounted for supply, losses, gains, net storage withdrawals, heat loss when natural gas is converted to liquid fuel, and heat loss when coal is converted to liquid fuel.

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

<sup>9</sup>Includes net electricity imports, methanol, and liquid hydrogen.

<sup>10</sup>Average refiner acquisition cost for imported crude oil.

<sup>11</sup>Represents lower 48 onshore and offshore supplies.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports.

Sources: 2001 natural gas supply values: Energy Information Administration (EIA), *Natural Gas Monthly*, DOE/EIA-0130(2002/08) (Washington, DC, August 2002). 2001 petroleum supply values: EIA, *Petroleum Supply Annual 2001*, DOE/EIA-0340(2001)/1 (Washington, DC, June 2002). Other 2001 values: EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002) and EIA, *Quarterly Coal Report, October-December 2001*, DOE/EIA-0121(2001/4Q) (Washington, DC, May 2002). Projections: EIA, AEQ2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I2. Energy Consumption by Sector and Source**  
(Quadrillion Btu per Year, Unless Otherwise Noted)

Sector and Source	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Energy Consumption</b>										
<b>Residential</b>										
Distillate Fuel	0.91	0.91	0.91	0.91	0.84	0.84	0.84	0.81	0.81	0.81
Kerosene	0.10	0.08	0.08	0.08	0.06	0.06	0.06	0.06	0.06	0.06
Liquefied Petroleum Gas	0.50	0.47	0.47	0.47	0.46	0.46	0.46	0.46	0.47	0.47
Petroleum Subtotal	1.50	1.46	1.46	1.46	1.36	1.37	1.37	1.33	1.33	1.34
Natural Gas	4.94	5.63	5.55	5.54	6.10	6.01	5.77	6.38	6.09	5.89
Coal	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Renewable Energy <sup>1</sup>	0.39	0.41	0.41	0.41	0.41	0.40	0.40	0.40	0.40	0.40
Electricity	4.10	4.93	4.91	4.85	5.60	5.57	4.96	5.95	5.86	4.97
<b>Delivered Energy</b>	<b>10.94</b>	<b>12.45</b>	<b>12.34</b>	<b>12.27</b>	<b>13.48</b>	<b>13.36</b>	<b>12.51</b>	<b>14.08</b>	<b>13.69</b>	<b>12.61</b>
Electricity Related Losses	9.15	10.37	10.37	10.23	11.03	11.17	9.60	11.42	11.53	9.70
<b>Total</b>	<b>20.08</b>	<b>22.82</b>	<b>22.70</b>	<b>22.50</b>	<b>24.51</b>	<b>24.53</b>	<b>22.11</b>	<b>25.50</b>	<b>25.22</b>	<b>22.31</b>
<b>Commercial</b>										
Distillate Fuel	0.46	0.51	0.52	0.52	0.52	0.55	0.58	0.52	0.57	0.63
Residual Fuel	0.09	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05
Kerosene	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Liquefied Petroleum Gas	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10
Motor Gasoline <sup>2</sup>	0.05	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04
Petroleum Subtotal	0.71	0.70	0.71	0.71	0.72	0.75	0.78	0.72	0.77	0.84
Natural Gas	3.33	3.74	3.67	3.67	4.23	4.14	4.09	4.50	4.24	4.60
Coal	0.09	0.10	0.10	0.09	0.10	0.10	0.11	0.11	0.11	0.11
Renewable Energy <sup>3</sup>	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Electricity	4.08	5.01	4.98	4.93	6.17	6.14	5.60	6.79	6.70	5.92
<b>Delivered Energy</b>	<b>8.32</b>	<b>9.65</b>	<b>9.57</b>	<b>9.52</b>	<b>11.33</b>	<b>11.24</b>	<b>10.69</b>	<b>12.23</b>	<b>11.93</b>	<b>11.57</b>
Electricity Related Losses	9.12	10.53	10.52	10.41	12.16	12.30	10.86	13.02	13.19	11.56
<b>Total</b>	<b>17.44</b>	<b>20.19</b>	<b>20.09</b>	<b>19.92</b>	<b>23.50</b>	<b>23.55</b>	<b>21.55</b>	<b>25.25</b>	<b>25.12</b>	<b>23.13</b>
<b>Industrial<sup>4</sup></b>										
Distillate Fuel	1.13	1.21	1.22	1.20	1.36	1.37	1.32	1.44	1.48	1.40
Liquefied Petroleum Gas	2.10	2.55	2.55	2.57	3.06	3.11	3.05	3.28	3.38	3.64
Petrochemical Feedstock	1.14	1.44	1.43	1.40	1.70	1.70	1.52	1.82	1.81	1.57
Residual Fuel	0.23	0.19	0.19	0.18	0.20	0.20	0.18	0.20	0.23	0.19
Motor Gasoline <sup>2</sup>	0.15	0.17	0.16	0.16	0.18	0.18	0.18	0.19	0.19	0.19
Other Petroleum <sup>5</sup>	4.03	4.27	4.29	4.14	4.46	4.49	4.02	4.57	4.60	4.02
Petroleum Subtotal	8.79	9.82	9.84	9.65	10.96	11.05	10.28	11.50	11.69	11.01
Natural Gas	7.74	9.06	8.87	9.02	10.39	10.09	10.02	11.23	10.41	9.89
Lease and Plant Fuel <sup>6</sup>	1.20	1.37	1.32	1.34	1.60	1.49	1.54	1.73	1.51	1.51
Natural Gas Subtotal	8.94	10.43	10.19	10.36	11.98	11.58	11.56	12.96	11.92	11.40
Metallurgical Coal	0.72	0.66	0.66	0.65	0.55	0.55	0.47	0.50	0.50	0.39
Steam Coal	1.42	1.46	1.47	1.34	1.51	1.52	1.29	1.54	1.59	1.30
Net Coal Coke Imports	0.03	0.11	0.11	0.10	0.16	0.16	0.18	0.18	0.17	0.21
Coal Subtotal	2.16	2.23	2.23	2.10	2.22	2.23	1.94	2.22	2.26	1.90
Renewable Energy <sup>7</sup>	1.82	2.22	2.21	2.20	2.77	2.77	2.74	3.05	3.03	3.01
Electricity	3.39	3.97	3.97	3.88	4.65	4.69	4.44	5.01	5.05	4.72
<b>Delivered Energy</b>	<b>25.10</b>	<b>28.67</b>	<b>28.45</b>	<b>28.19</b>	<b>32.58</b>	<b>32.32</b>	<b>30.96</b>	<b>34.75</b>	<b>33.95</b>	<b>32.05</b>
Electricity Related Losses	7.57	8.35	8.38	8.18	9.17	9.40	8.60	9.61	9.93	9.21
<b>Total</b>	<b>32.67</b>	<b>37.02</b>	<b>36.83</b>	<b>36.37</b>	<b>41.75</b>	<b>41.72</b>	<b>39.56</b>	<b>44.36</b>	<b>43.88</b>	<b>41.26</b>

**Table I2. Energy Consumption by Sector and Source (Continued)**  
(Quadrillion Btu per Year, Unless Otherwise Noted)

Sector and Source	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Transportation</b>										
Distillate Fuel <sup>8</sup>	5.44	7.09	7.07	7.00	8.68	8.71	8.29	9.55	9.54	8.97
Jet Fuel <sup>9</sup>	3.43	3.93	3.93	3.90	5.09	5.09	5.01	5.67	5.67	5.56
Motor Gasoline <sup>2</sup>	16.26	19.81	19.78	19.53	23.57	23.56	21.35	25.48	25.39	21.90
Residual Fuel	0.84	0.83	0.83	0.83	0.85	0.85	0.84	0.87	0.86	0.85
Liquefied Petroleum Gas	0.02	0.05	0.05	0.05	0.07	0.07	0.08	0.09	0.08	0.08
Other Petroleum <sup>10</sup>	0.24	0.26	0.26	0.26	0.30	0.30	0.30	0.32	0.32	0.32
Petroleum Subtotal	26.22	31.98	31.91	31.56	38.57	38.58	35.88	41.98	41.86	37.69
Pipeline Fuel Natural Gas	0.63	0.78	0.73	0.74	0.94	0.84	0.91	1.03	0.87	0.93
Compressed Natural Gas	0.01	0.06	0.06	0.06	0.10	0.10	0.09	0.11	0.10	0.09
Renewable Energy (E85) <sup>11</sup>	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
Liquid Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Electricity	0.07	0.09	0.09	0.09	0.12	0.12	0.12	0.14	0.14	0.13
<b>Delivered Energy</b>	<b>26.94</b>	<b>32.91</b>	<b>32.80</b>	<b>32.46</b>	<b>39.73</b>	<b>39.65</b>	<b>37.01</b>	<b>43.26</b>	<b>42.99</b>	<b>38.85</b>
Electricity Related Losses	0.17	0.20	0.20	0.20	0.24	0.25	0.23	0.27	0.28	0.26
<b>Total</b>	<b>27.10</b>	<b>33.10</b>	<b>32.99</b>	<b>32.65</b>	<b>39.98</b>	<b>39.90</b>	<b>37.24</b>	<b>43.53</b>	<b>43.26</b>	<b>39.11</b>
<b>Delivered Energy Consumption for All Sectors</b>										
Distillate Fuel	7.94	9.74	9.72	9.63	11.40	11.46	11.04	12.32	12.39	11.81
Kerosene	0.15	0.12	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.10
Jet Fuel <sup>9</sup>	3.43	3.93	3.93	3.90	5.09	5.09	5.01	5.67	5.67	5.56
Liquefied Petroleum Gas	2.70	3.16	3.17	3.18	3.69	3.74	3.69	3.92	4.03	4.29
Motor Gasoline <sup>2</sup>	16.46	20.01	19.98	19.73	23.79	23.78	21.57	25.71	25.62	22.13
Petrochemical Feedstock	1.14	1.44	1.43	1.40	1.70	1.70	1.52	1.82	1.81	1.57
Residual Fuel	1.15	1.06	1.06	1.05	1.10	1.10	1.07	1.12	1.14	1.09
Other Petroleum <sup>12</sup>	4.24	4.51	4.52	4.37	4.74	4.77	4.30	4.87	4.89	4.32
Petroleum Subtotal	37.21	43.97	43.93	43.38	51.61	51.75	48.31	55.53	55.65	50.87
Natural Gas	16.02	18.49	18.15	18.29	20.82	20.34	19.98	22.23	20.84	20.47
Lease and Plant Fuel Plant <sup>6</sup>	1.20	1.37	1.32	1.34	1.60	1.49	1.54	1.73	1.51	1.51
Pipeline Natural Gas	0.63	0.78	0.73	0.74	0.94	0.84	0.91	1.03	0.87	0.93
Natural Gas Subtotal	17.86	20.64	20.20	20.37	23.35	22.67	22.43	24.98	23.23	22.91
Metallurgical Coal	0.72	0.66	0.66	0.65	0.55	0.55	0.47	0.50	0.50	0.39
Steam Coal	1.53	1.56	1.58	1.45	1.63	1.64	1.41	1.66	1.71	1.42
Net Coal Coke Imports	0.03	0.11	0.11	0.10	0.16	0.16	0.18	0.18	0.17	0.21
Coal Subtotal	2.27	2.34	2.34	2.20	2.34	2.35	2.06	2.34	2.38	2.02
Renewable Energy <sup>13</sup>	2.31	2.74	2.73	2.72	3.28	3.29	3.25	3.57	3.54	3.52
Liquid Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Electricity	11.65	14.00	13.95	13.76	16.54	16.52	15.12	17.90	17.75	15.75
<b>Delivered Energy</b>	<b>71.29</b>	<b>83.68</b>	<b>83.15</b>	<b>82.43</b>	<b>97.13</b>	<b>96.57</b>	<b>91.17</b>	<b>104.32</b>	<b>102.55</b>	<b>95.08</b>
Electricity Related Losses	26.00	29.45	29.47	29.02	32.61	33.12	29.28	34.32	34.93	30.72
<b>Total</b>	<b>97.29</b>	<b>113.13</b>	<b>112.62</b>	<b>111.44</b>	<b>129.74</b>	<b>129.69</b>	<b>120.45</b>	<b>138.63</b>	<b>137.48</b>	<b>125.81</b>
<b>Electric Power<sup>14</sup></b>										
Distillate Fuel	0.17	0.09	0.13	0.09	0.13	0.12	0.14	0.18	0.87	0.31
Residual Fuel	1.08	0.39	0.47	0.21	0.41	0.46	0.15	0.40	0.63	0.14
Petroleum Subtotal	1.25	0.48	0.60	0.30	0.54	0.58	0.29	0.58	1.50	0.45
Natural Gas	5.40	6.71	6.44	6.59	9.60	7.77	9.57	10.56	6.84	7.62
Steam Coal	19.75	23.13	23.22	20.44	25.54	27.76	11.73	27.52	30.73	9.83
Nuclear Power	8.03	8.25	8.25	8.37	8.28	8.28	9.80	8.28	8.28	13.69
Renewable Energy <sup>15</sup>	3.01	4.57	4.59	6.62	5.02	5.09	12.35	5.21	5.27	14.49
Electricity Imports	0.21	0.31	0.33	0.46	0.17	0.15	0.65	0.06	0.07	0.39
<b>Total</b>	<b>37.65</b>	<b>43.45</b>	<b>43.42</b>	<b>42.77</b>	<b>49.15</b>	<b>49.64</b>	<b>44.40</b>	<b>52.21</b>	<b>52.68</b>	<b>46.48</b>

**Table I2. Energy Consumption by Sector and Source (Continued)**  
(Quadrillion Btu per Year, Unless Otherwise Noted)

Sector and Source	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Total Energy Consumption</b>										
Distillate Fuel .....	8.10	9.83	9.85	9.72	11.53	11.59	11.18	12.50	13.26	12.12
Kerosene .....	0.15	0.12	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.10
Jet Fuel <sup>9</sup> .....	3.43	3.93	3.93	3.90	5.09	5.09	5.01	5.67	5.67	5.56
Liquefied Petroleum Gas .....	2.70	3.16	3.17	3.18	3.69	3.74	3.69	3.92	4.03	4.29
Motor Gasoline <sup>2</sup> .....	16.46	20.01	19.98	19.73	23.79	23.78	21.57	25.71	25.62	22.13
Petrochemical Feedstock .....	1.14	1.44	1.43	1.40	1.70	1.70	1.52	1.82	1.81	1.57
Residual Fuel .....	2.23	1.45	1.54	1.26	1.51	1.56	1.21	1.52	1.77	1.23
Other Petroleum <sup>12</sup> .....	4.24	4.51	4.52	4.37	4.74	4.77	4.30	4.87	4.89	4.32
Petroleum Subtotal .....	38.46	44.45	44.53	43.68	52.15	52.33	48.60	56.11	57.14	51.32
Natural Gas .....	21.42	25.20	24.58	24.87	30.42	28.11	29.56	32.79	27.68	28.10
Lease and Plant Fuel <sup>6</sup> .....	1.20	1.37	1.32	1.34	1.60	1.49	1.54	1.73	1.51	1.51
Pipeline Natural Gas .....	0.63	0.78	0.73	0.74	0.94	0.84	0.91	1.03	0.87	0.93
Natural Gas Subtotal .....	23.26	27.35	26.63	26.95	32.95	30.44	32.00	35.55	30.07	30.54
Metallurgical Coal .....	0.72	0.66	0.66	0.65	0.55	0.55	0.47	0.50	0.50	0.39
Steam Coal .....	21.28	24.70	24.79	21.89	27.17	29.40	13.15	29.18	32.44	11.25
Net Coal Coke Imports .....	0.03	0.11	0.11	0.10	0.16	0.16	0.18	0.18	0.17	0.21
Coal Subtotal .....	22.02	25.47	25.56	22.65	27.88	30.11	13.79	29.86	33.11	11.86
Nuclear Power .....	8.03	8.25	8.25	8.37	8.28	8.28	9.80	8.28	8.28	13.69
Renewable Energy <sup>16</sup> .....	5.32	7.30	7.32	9.33	8.31	8.38	15.60	8.77	8.81	18.01
Liquid Hydrogen .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Electricity Imports .....	0.21	0.31	0.33	0.46	0.17	0.15	0.65	0.06	0.07	0.39
<b>Total</b> .....	<b>97.29</b>	<b>113.13</b>	<b>112.62</b>	<b>111.44</b>	<b>129.74</b>	<b>129.69</b>	<b>120.45</b>	<b>138.63</b>	<b>137.48</b>	<b>125.81</b>
<b>Energy Use and Related Statistics</b>										
Delivered Energy Use .....	71.29	83.68	83.15	82.43	97.13	96.57	91.17	104.32	102.55	95.08
Total Energy Use .....	97.29	113.13	112.62	111.44	129.74	129.69	120.45	138.63	137.48	125.81
Population (millions) .....	278.18	300.24	300.24	300.24	325.32	325.32	325.32	338.24	338.24	338.24
Gross Domestic Product (billion 1996 dollars) ...	9215	12258	12230	12187	16444	16465	16354	18916	18854	18787
Carbon Dioxide Emissions (million metric tons carbon equivalent) .....	1558.6	1802.2	1796.2	1709.0	2077.7	2101.6	1576.8	2234.4	2259.6	1474.2

<sup>1</sup>Includes wood used for residential heating. See Table I18 for estimates of nonmarketed renewable energy consumption for geothermal heat pumps, solar thermal hot water heating, and solar photovoltaic electricity generation.

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

<sup>3</sup>Includes commercial sector consumption of wood and wood waste, landfill gas, municipal solid waste, and other biomass for combined heat and power. See Table I18 for estimates of nonmarketed renewable energy consumption for solar thermal hot water heating and solar photovoltaic electricity generation.

<sup>4</sup>Fuel consumption includes consumption for combined heat and power, which produces electricity, both for sale to the grid and for own use, and other useful thermal energy.

<sup>5</sup>Includes petroleum coke, asphalt, road oil, lubricants, still gas, and miscellaneous petroleum products.

<sup>6</sup>Represents natural gas used in the field gathering and processing plant machinery.

<sup>7</sup>Includes consumption of energy from hydroelectric, wood and wood waste, municipal solid waste, and other biomass.

<sup>8</sup>Diesel fuel containing 500 parts per million (ppm) or 15 ppm sulfur.

<sup>9</sup>Includes only kerosene type.

<sup>10</sup>Includes aviation gasoline and lubricants.

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

<sup>12</sup>Includes unfinished oils, natural gasoline, motor gasoline blending components, aviation gasoline, lubricants, still gas, asphalt, road oil, petroleum coke, and miscellaneous petroleum products.

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

<sup>14</sup>Includes consumption of energy by electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

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

<sup>16</sup>Includes hydroelectric, geothermal, wood and wood waste, municipal solid waste, other biomass, wind, photovoltaic and solar thermal sources. Includes ethanol components of E85; excludes ethanol blends (10 percent or less) in motor gasoline. Excludes net electricity imports and nonmarketed renewable energy consumption for geothermal heat pumps, buildings photovoltaic systems, and solar thermal hot water heaters.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports. Consumption values of 0.00 are values that round to 0.00, because they are less than 0.005.

Sources: 2001 consumption based on: Energy Information Administration (EIA), *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002). 2001 population and gross domestic product: Global Insight macroeconomic model CTL0802. 2001 carbon dioxide emissions: EIA, *Emissions of Greenhouse Gases in the United States 2001*, DOE/EIA-0573(2001) (Washington, DC, December 2002). Projections: EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I3. Delivered Energy Prices by Sector and Source**  
(2001 Dollars per Million Btu, Unless Otherwise Noted)

Sector and Source	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Residential</b>	<b>15.81</b>	<b>13.97</b>	<b>14.38</b>	<b>15.03</b>	<b>14.62</b>	<b>15.02</b>	<b>18.52</b>	<b>14.89</b>	<b>16.30</b>	<b>20.20</b>
Primary Energy <sup>1</sup>	9.73	8.07	8.44	8.45	8.33	8.63	9.28	8.57	9.81	9.96
Petroleum Products <sup>2</sup>	10.85	10.02	10.06	9.93	10.91	10.93	10.48	11.21	11.27	10.79
Distillate Fuel	8.99	7.99	8.06	7.92	8.70	8.73	8.28	8.93	8.93	8.58
Liquefied Petroleum Gas	14.84	14.35	14.31	14.21	15.28	15.28	14.89	15.52	15.67	14.98
Natural Gas	9.41	7.57	8.03	8.08	7.77	8.13	9.01	8.04	9.51	9.79
Electricity	25.37	22.48	22.88	24.54	23.03	23.48	31.86	23.09	24.52	35.13
<b>Commercial</b>	<b>15.50</b>	<b>13.45</b>	<b>13.93</b>	<b>14.81</b>	<b>14.58</b>	<b>15.02</b>	<b>19.02</b>	<b>15.00</b>	<b>16.53</b>	<b>20.81</b>
Primary Energy <sup>1</sup>	7.81	6.43	6.80	6.82	6.78	7.06	7.68	7.05	8.28	8.37
Petroleum Products <sup>2</sup>	7.27	6.78	6.81	6.69	7.51	7.49	6.98	7.81	7.79	7.18
Distillate Fuel	6.40	5.67	5.73	5.60	6.45	6.48	5.98	6.75	6.77	6.28
Residual Fuel	3.46	4.01	4.03	3.94	4.23	4.24	3.96	4.39	4.42	4.02
Natural Gas	8.09	6.49	6.93	6.98	6.79	7.12	7.98	7.07	8.54	8.75
Electricity	23.28	19.81	20.35	22.07	20.98	21.51	29.09	21.25	22.83	32.46
<b>Industrial<sup>3</sup></b>	<b>7.11</b>	<b>6.39</b>	<b>6.63</b>	<b>6.85</b>	<b>7.01</b>	<b>7.23</b>	<b>8.42</b>	<b>7.25</b>	<b>8.13</b>	<b>9.35</b>
Primary Energy	5.83	5.18	5.38	5.36	5.74	5.92	6.14	5.99	6.76	6.70
Petroleum Products <sup>2</sup>	7.72	7.07	7.09	7.01	7.85	7.88	7.52	8.13	8.25	7.84
Distillate Fuel	6.55	5.75	5.82	5.68	6.74	6.78	6.19	7.19	7.24	6.53
Liquefied Petroleum Gas	12.34	9.93	9.90	9.83	10.85	10.88	10.58	11.13	11.26	10.66
Residual Fuel	3.28	3.71	3.73	3.66	3.94	3.94	3.70	4.10	4.13	3.77
Natural Gas <sup>4</sup>	4.87	4.00	4.43	4.47	4.39	4.72	5.57	4.63	6.19	6.38
Metallurgical Coal	1.69	1.50	1.51	1.50	1.39	1.39	1.40	1.34	1.33	1.34
Steam Coal	1.46	1.39	1.39	1.39	1.31	1.34	1.22	1.30	1.33	1.17
Electricity	14.13	12.82	13.22	14.78	13.37	13.71	19.75	13.48	14.64	22.03
<b>Transportation</b>	<b>10.28</b>	<b>10.22</b>	<b>10.24</b>	<b>11.81</b>	<b>10.37</b>	<b>10.36</b>	<b>13.46</b>	<b>10.82</b>	<b>10.79</b>	<b>14.07</b>
Primary Energy	10.25	10.19	10.21	11.79	10.35	10.33	13.42	10.79	10.76	14.03
Petroleum Products <sup>2</sup>	10.25	10.20	10.22	11.79	10.35	10.34	13.43	10.80	10.76	14.04
Distillate Fuel <sup>5</sup>	10.05	10.19	10.19	11.82	10.27	10.18	13.43	10.64	10.54	14.25
Jet Fuel <sup>6</sup>	6.20	5.66	5.70	7.17	6.34	6.34	9.46	6.72	6.73	10.22
Motor Gasoline <sup>7</sup>	11.57	11.45	11.48	13.06	11.55	11.56	14.68	12.07	12.04	15.23
Residual Fuel	3.90	3.56	3.57	5.29	3.78	3.78	7.57	3.94	3.95	8.17
Liquefied Petroleum Gas <sup>8</sup>	16.93	15.55	15.40	16.65	16.06	16.07	18.91	15.99	16.37	19.10
Natural Gas <sup>9</sup>	7.65	7.19	7.63	7.55	7.75	8.06	8.55	8.09	9.52	9.32
Electricity	21.87	19.10	19.51	21.26	18.45	18.81	25.64	17.90	19.05	27.37
<b>Average End-Use Energy</b>	<b>10.75</b>	<b>9.97</b>	<b>10.18</b>	<b>11.10</b>	<b>10.47</b>	<b>10.64</b>	<b>13.30</b>	<b>10.82</b>	<b>11.44</b>	<b>14.33</b>
Primary Energy	8.52	8.07	8.22	8.99	8.46	8.57	10.30	8.84	9.28	10.93
Electricity	21.34	18.76	19.20	20.88	19.52	19.94	27.23	19.66	21.03	30.13
<b>Electric Power<sup>10</sup></b>										
Fossil Fuel Average	2.14	1.82	1.90	1.99	2.04	1.94	3.13	2.13	2.16	3.35
Petroleum Products	4.73	4.28	4.26	4.47	4.72	4.63	5.11	5.04	5.40	5.49
Distillate Fuel	6.20	5.13	5.20	5.01	5.94	5.98	5.43	6.16	6.14	5.73
Residual Fuel	4.50	4.08	4.01	4.23	4.33	4.28	4.81	4.55	4.39	4.97
Natural Gas	4.78	3.88	4.31	4.41	4.35	4.62	5.62	4.64	6.04	6.24
Steam Coal	1.25	1.17	1.17	1.17	1.12	1.14	1.05	1.11	1.14	1.01

**Table I3. Delivered Energy Prices by Sector and Source (Continued)**  
(2001 Dollars per Million Btu, Unless Otherwise Noted)

Sector and Source	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Average Price to All Users<sup>11</sup></b>										
Petroleum Products <sup>2</sup>	9.54	9.46	9.46	10.61	9.81	9.80	11.99	10.22	10.14	12.49
Distillate Fuel	9.16	9.15	9.15	10.30	9.52	9.46	11.69	9.90	9.62	12.35
Jet Fuel	6.20	5.66	5.70	7.17	6.34	6.34	9.46	6.72	6.73	10.22
Liquefied Petroleum Gas	12.85	10.75	10.71	10.66	11.58	11.59	11.35	11.81	11.93	11.35
Motor Gasoline <sup>7</sup>	11.57	11.45	11.47	13.04	11.55	11.56	14.64	12.07	12.04	15.19
Residual Fuel	4.11	3.73	3.74	4.84	3.96	3.96	6.53	4.14	4.14	6.97
Natural Gas	6.40	5.15	5.60	5.64	5.40	5.79	6.60	5.64	7.26	7.46
Coal	1.26	1.18	1.19	1.18	1.13	1.15	1.07	1.12	1.15	1.03
Ethanol (E85) <sup>10</sup>	17.72	21.29	21.42	20.70	22.85	22.95	20.80	23.44	23.89	21.07
Electricity	21.34	18.76	19.20	20.88	19.52	19.94	27.23	19.66	21.03	30.13
<b>Non-Renewable Energy Expenditures by Sector (billion 2001 dollars)</b>										
Residential	166.77	168.16	171.58	178.33	191.19	194.57	224.31	203.68	216.65	246.76
Commercial	127.30	128.40	131.83	139.42	163.77	167.31	201.31	181.88	195.41	238.70
Industrial	135.32	137.86	142.38	146.53	172.27	177.20	199.58	190.69	211.00	231.92
Transportation	270.41	328.32	328.36	374.58	402.37	401.96	485.62	456.80	454.28	533.51
Total Non-Renewable Expenditures	699.80	762.73	774.16	838.87	929.60	941.04	1110.82	1033.06	1077.35	1250.90
Transportation Renewable Expenditures	0.01	0.05	0.05	0.05	0.10	0.10	0.11	0.13	0.13	0.15
<b>Total Expenditures</b>	<b>699.81</b>	<b>762.78</b>	<b>774.20</b>	<b>838.92</b>	<b>929.70</b>	<b>941.14</b>	<b>1110.93</b>	<b>1033.19</b>	<b>1077.48</b>	<b>1251.05</b>

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

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

<sup>3</sup>Includes combined heat and power, which produces electricity and other useful thermal energy.

<sup>4</sup>Excludes use for lease and plant fuel.

<sup>5</sup>Diesel fuel containing 500 parts per million (ppm) or 15 ppm sulfur. Price includes Federal and State taxes while excluding county and local taxes.

<sup>6</sup>Kerosene-type jet fuel. Price includes Federal and State taxes while excluding county and local taxes.

<sup>7</sup>Sales weighted-average price for all grades. Includes Federal, State and local taxes.

<sup>8</sup>Includes Federal and State taxes while excluding county and local taxes.

<sup>9</sup>Compressed natural gas used as a vehicle fuel. Price includes estimated motor vehicle fuel taxes.

<sup>10</sup>Includes electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>11</sup>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.

Note: Data for 2001 are model results and may differ slightly from official EIA data reports.

**Sources:** 2001 prices for motor gasoline, distillate, and jet fuel are based on: Energy Information Administration (EIA), *Petroleum Marketing Annual 2001*, [http://www.eia.doe.gov/pub/oil\\_gas/petroleum/data\\_publications/petroleum\\_marketing\\_annual/current/pdf/pmaall.pdf](http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/petroleum_marketing_annual/current/pdf/pmaall.pdf) (September 2002). 2001 residential, commercial, and transportation natural gas delivered prices: EIA, *Natural Gas Monthly*, DOE/EIA-0130(2002/08) (Washington, DC, August 2002). 2001 electric power prices: Federal Energy Regulatory Commission, FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants." 2001 industrial natural gas delivered prices based on: EIA, *Manufacturing Energy Consumption Survey 1998*. 2001 coal prices based on EIA, *Quarterly Coal Report, October-December 2001*, DOE/EIA-0121(2001/4Q) (Washington, DC, May 2002) and EIA, AEO2003 National Energy Modeling System run MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A. 2001 electricity prices: EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002). 2001 ethanol prices derived from weekly spot prices in the Oxy Fuel News. **Projections:** EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I4. Greenhouse Gas Allowance Cost by End-Use Sector and Source**  
(2001 Dollars per Million Btu, Unless Otherwise Noted)

Sector and Source	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Commercial</b>										
Petroleum Products <sup>2</sup> .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Distillate Fuel .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residual Fuel .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Industrial<sup>3</sup></b>										
Petroleum Products <sup>2</sup> .....	0.00	0.00	0.00	1.00	0.00	0.00	2.29	0.00	0.00	2.65
Distillate Fuel .....	0.00	0.00	0.00	1.65	0.00	0.00	3.72	0.00	0.00	4.22
Liquefied Petroleum Gas .....	0.00	0.00	0.00	1.42	0.00	0.00	3.22	0.00	0.00	3.65
Residual Fuel .....	0.00	0.00	0.00	1.77	0.00	0.00	4.01	0.00	0.00	4.55
Natural Gas <sup>4</sup> .....	0.00	0.00	0.00	1.18	0.00	0.00	2.66	0.00	0.00	3.02
Metallurgical Coal .....	0.00	0.00	0.00	2.11	0.00	0.00	4.77	0.00	0.00	5.41
Steam Coal .....	0.00	0.00	0.00	2.11	0.00	0.00	4.78	0.00	0.00	5.42
<b>Electric Power<sup>5</sup></b>										
Fossil Fuel Average .....	0.00	0.00	0.00	1.90	0.00	0.00	3.86	0.00	0.00	4.40
Petroleum Products .....	0.00	0.00	0.00	1.73	0.00	0.00	3.87	0.00	0.00	4.32
Distillate Fuel .....	0.00	0.00	0.00	1.65	0.00	0.00	3.72	0.00	0.00	4.22
Residual Fuel .....	0.00	0.00	0.00	1.77	0.00	0.00	4.01	0.00	0.00	4.55
Natural Gas .....	0.00	0.00	0.00	1.20	0.00	0.00	2.71	0.00	0.00	3.08
Steam Coal .....	0.00	0.00	0.00	2.13	0.00	0.00	4.79	0.00	0.00	5.44
<b>Average Allowance Cost to All Users<sup>6</sup></b>										
Petroleum Products <sup>2</sup> .....	0.00	0.00	0.00	0.24	0.00	0.00	0.52	0.00	0.00	0.62
Distillate Fuel .....	0.00	0.00	0.00	0.22	0.00	0.00	0.49	0.00	0.00	0.60
Jet Fuel .....	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	1.15	0.00	0.00	2.67	0.00	0.00	3.10
Motor Gasoline .....	0.00	0.00	0.00	0.01	0.00	0.00	0.03	0.00	0.00	0.03
Residual Fuel .....	0.00	0.00	0.00	0.55	0.00	0.00	1.07	0.00	0.00	1.21
Natural Gas .....	0.00	0.00	0.00	0.75	0.00	0.00	1.79	0.00	0.00	1.91
Coal .....	0.00	0.00	0.00	2.12	0.00	0.00	4.75	0.00	0.00	5.38

<sup>1</sup>Weighted average allowance cost includes fuels below as well as coal.

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

<sup>3</sup>Includes combined heat and power, which produces electricity and other useful thermal energy.

<sup>4</sup>Excludes use for lease and plant fuel.

<sup>5</sup>Includes electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>6</sup>Weighted averages of allowance costs are derived from the prices shown in each sector and the corresponding sectoral consumption.

Btu = British thermal unit.

**Projections:** EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I5. Energy Prices by Sector and Source with Greenhouse Gas Allowance Cost**  
(2001 Dollars per Million Btu, Unless Otherwise Noted)

Sector and Source	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Residential</b>	<b>15.81</b>	<b>13.97</b>	<b>14.38</b>	<b>15.03</b>	<b>14.62</b>	<b>15.02</b>	<b>18.52</b>	<b>14.89</b>	<b>16.30</b>	<b>20.20</b>
Primary Energy <sup>1</sup>	9.73	8.07	8.44	8.45	8.33	8.63	9.28	8.57	9.81	9.96
Petroleum Products <sup>2</sup>	10.85	10.02	10.06	9.93	10.91	10.93	10.48	11.21	11.27	10.79
Distillate Fuel	8.99	7.99	8.06	7.92	8.70	8.73	8.28	8.93	8.93	8.58
Liquefied Petroleum Gas	14.84	14.35	14.31	14.21	15.28	15.28	14.89	15.52	15.67	14.98
Natural Gas	9.41	7.57	8.03	8.08	7.77	8.13	9.01	8.04	9.51	9.79
Electricity	25.37	22.48	22.88	24.54	23.03	23.48	31.86	23.09	24.52	35.13
<b>Commercial</b>	<b>15.50</b>	<b>13.45</b>	<b>13.93</b>	<b>14.81</b>	<b>14.58</b>	<b>15.02</b>	<b>19.02</b>	<b>15.00</b>	<b>16.53</b>	<b>20.81</b>
Primary Energy <sup>1</sup>	7.81	6.43	6.80	6.82	6.78	7.06	7.68	7.05	8.28	8.37
Petroleum Products <sup>2</sup>	7.27	6.78	6.81	6.69	7.51	7.49	6.98	7.81	7.79	7.18
Distillate Fuel	6.40	5.67	5.73	5.60	6.45	6.48	5.98	6.75	6.77	6.28
Residual Fuel	3.46	4.01	4.03	3.94	4.23	4.24	3.96	4.39	4.42	4.02
Natural Gas	8.09	6.49	6.93	6.98	6.79	7.12	7.98	7.07	8.54	8.75
Electricity	23.28	19.81	20.35	22.07	20.98	21.51	29.09	21.25	22.83	32.46
<b>Industrial<sup>3</sup></b>	<b>7.11</b>	<b>6.39</b>	<b>6.63</b>	<b>7.85</b>	<b>7.01</b>	<b>7.23</b>	<b>10.63</b>	<b>7.25</b>	<b>8.13</b>	<b>11.85</b>
Primary Energy	5.83	5.18	5.38	6.55	5.74	5.92	8.79	5.99	6.76	9.72
Petroleum Products <sup>2</sup>	7.72	7.07	7.09	8.01	7.85	7.88	9.81	8.13	8.25	10.49
Distillate Fuel	6.55	5.75	5.82	7.33	6.74	6.78	9.92	7.19	7.24	10.75
Liquefied Petroleum Gas	12.34	9.93	9.90	11.25	10.85	10.88	13.80	11.13	11.26	14.31
Residual Fuel	3.28	3.71	3.73	5.43	3.94	3.94	7.71	4.10	4.13	8.31
Natural Gas <sup>4</sup>	4.87	4.00	4.43	5.65	4.39	4.72	8.23	4.63	6.19	9.40
Metallurgical Coal	1.69	1.50	1.51	3.61	1.39	1.39	6.17	1.34	1.33	6.74
Steam Coal	1.46	1.39	1.39	3.50	1.31	1.34	6.00	1.30	1.33	6.59
Electricity	14.13	12.82	13.22	14.78	13.37	13.71	19.75	13.48	14.64	22.03
<b>Transportation</b>	<b>10.28</b>	<b>10.22</b>	<b>10.24</b>	<b>11.82</b>	<b>10.37</b>	<b>10.36</b>	<b>13.46</b>	<b>10.82</b>	<b>10.79</b>	<b>14.08</b>
Primary Energy	10.25	10.19	10.21	11.79	10.35	10.33	13.42	10.79	10.76	14.03
Petroleum Products <sup>2</sup>	10.25	10.20	10.22	11.79	10.35	10.34	13.43	10.80	10.76	14.04
Distillate Fuel <sup>5</sup>	10.05	10.19	10.19	11.82	10.27	10.18	13.43	10.64	10.54	14.25
Jet Fuel <sup>6</sup>	6.20	5.66	5.70	7.17	6.34	6.34	9.46	6.72	6.73	10.22
Motor Gasoline <sup>7</sup>	11.57	11.45	11.48	13.06	11.55	11.56	14.68	12.07	12.04	15.23
Residual Fuel	3.90	3.56	3.57	5.29	3.78	3.78	7.57	3.94	3.95	8.17
Liquefied Petroleum Gas <sup>8</sup>	16.93	15.55	15.40	16.65	16.06	16.07	18.91	15.99	16.37	19.10
Natural Gas <sup>9</sup>	7.65	7.19	7.63	8.75	7.75	8.06	11.26	8.09	9.52	12.40
Electricity	21.87	19.10	19.51	21.26	18.45	18.81	25.64	17.90	19.05	27.37
<b>Average End-Use Energy</b>	<b>10.75</b>	<b>9.97</b>	<b>10.18</b>	<b>11.42</b>	<b>10.47</b>	<b>10.64</b>	<b>13.99</b>	<b>10.82</b>	<b>11.44</b>	<b>15.10</b>
Primary Energy	8.52	8.07	8.22	9.37	8.46	8.57	11.14	8.84	9.28	11.87
Electricity	21.34	18.76	19.20	20.88	19.52	19.94	27.23	19.66	21.03	30.13
<b>Electric Power<sup>10</sup></b>										
Fossil Fuel Average	2.14	1.82	1.90	3.89	2.04	1.94	6.99	2.13	2.16	7.75
Petroleum Products	4.73	4.28	4.26	6.20	4.72	4.63	8.98	5.04	5.40	9.81
Distillate Fuel	6.20	5.13	5.20	6.65	5.94	5.98	9.15	6.16	6.14	9.95
Residual Fuel	4.50	4.08	4.01	6.01	4.33	4.28	8.82	4.55	4.39	9.51
Natural Gas	4.78	3.88	4.31	5.61	4.35	4.62	8.33	4.64	6.04	9.31
Steam Coal	1.25	1.17	1.17	3.30	1.12	1.14	5.84	1.11	1.14	6.45



**Table I5. Energy Prices by Sector and Source with Greenhouse Gas Allowance Cost (Continued)**  
(2001 Dollars per Million Btu, Unless Otherwise Noted)

Sector and Source	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Average Price to All Users<sup>11</sup></b>										
Petroleum Products <sup>2</sup>	9.54	9.46	9.46	10.85	9.81	9.80	12.51	10.22	10.14	13.11
Distillate Fuel	9.16	9.15	9.15	10.52	9.52	9.46	12.18	9.90	9.62	12.94
Jet Fuel	6.20	5.66	5.70	7.17	6.34	6.34	9.46	6.72	6.73	10.22
Liquefied Petroleum Gas	12.85	10.75	10.71	11.81	11.58	11.59	14.02	11.81	11.93	14.45
Motor Gasoline <sup>7</sup>	11.57	11.45	11.47	13.05	11.55	11.56	14.67	12.07	12.04	15.23
Residual Fuel	4.11	3.73	3.74	5.38	3.96	3.96	7.60	4.14	4.14	8.18
Natural Gas	6.40	5.15	5.60	6.38	5.40	5.79	8.39	5.64	7.26	9.36
Coal	1.26	1.18	1.19	3.30	1.13	1.15	5.82	1.12	1.15	6.41
Electricity	21.34	18.76	19.20	20.88	19.52	19.94	27.23	19.66	21.03	30.13
<b>Non-Renewable Energy and Allowance Expenditures by Sector (billion 2001 dollars)</b>										
Residential	166.77	168.16	171.58	178.33	191.19	194.57	224.31	203.68	216.65	246.76
Commercial	127.30	128.40	131.83	139.42	163.77	167.31	201.31	181.88	195.41	238.70
Industrial	135.32	137.86	142.38	167.97	172.27	177.20	251.86	190.69	211.00	294.09
Transportation	270.41	328.32	328.36	374.65	402.37	401.96	485.87	456.80	454.28	533.82
Total Non-Renewable Expenditures	699.80	762.73	774.16	860.38	929.60	941.04	1163.35	1033.06	1077.35	1313.37
Transportation Renewable Expenditures	0.01	0.05	0.05	0.05	0.10	0.10	0.12	0.13	0.13	0.16
<b>Total Expenditures</b>	<b>699.81</b>	<b>762.78</b>	<b>774.20</b>	<b>860.43</b>	<b>929.70</b>	<b>941.14</b>	<b>1163.47</b>	<b>1033.19</b>	<b>1077.48</b>	<b>1313.52</b>

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

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

<sup>3</sup>Includes combined heat and power, which produces electricity and other useful thermal energy.

<sup>4</sup>Excludes use for lease and plant fuel.

<sup>5</sup>Diesel fuel containing 500 parts per million (ppm) or 15 ppm sulfur. Price includes Federal and State taxes while excluding county and local taxes.

<sup>6</sup>Kerosene-type jet fuel. Price includes Federal and State taxes while excluding county and local taxes.

<sup>7</sup>Sales weighted-average price for all grades. Includes Federal, State and local taxes.

<sup>8</sup>Includes Federal and State taxes while excluding county and local taxes.

<sup>9</sup>Compressed natural gas used as a vehicle fuel. Price includes estimated motor vehicle fuel taxes.

<sup>10</sup>Includes electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>11</sup>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.

Note: Data for 2001 are model results and may differ slightly from official EIA data reports.

**Sources:** 2001 prices for motor gasoline, distillate, and jet fuel are based on: Energy Information Administration (EIA), *Petroleum Marketing Annual 2001*, [http://www.eia.doe.gov/pub/oil\\_gas/petroleum/data\\_publications/petroleum\\_marketing\\_annual/current/pdf/pmaall.pdf](http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/petroleum_marketing_annual/current/pdf/pmaall.pdf) (September 2002). 2001 residential, commercial, and transportation natural gas delivered prices: EIA, *Natural Gas Monthly*, DOE/EIA-0130(2002/08) (Washington, DC, August 2002). 2001 electric power prices: Federal Energy Regulatory Commission, FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants." 2001 industrial natural gas delivered prices based on: EIA, *Manufacturing Energy Consumption Survey 1998*. 2001 coal prices based on EIA, *Quarterly Coal Report, October-December 2001*, DOE/EIA-0121(2001/4Q) (Washington, DC, May 2002) and EIA, AEO2003 National Energy Modeling System run MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A. 2001 electricity prices: EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002). 2001 ethanol prices derived from weekly spot prices in the Oxy Fuel News. **Projections:** EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I6. Residential Sector Key Indicators and End-Use Consumption**  
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Key Indicators</b>										
<b>Households (millions)</b>										
Single-Family .....	77.50	86.16	86.15	86.12	94.13	94.14	93.98	97.63	97.63	97.42
Multifamily .....	22.19	24.15	24.13	24.11	27.09	27.10	26.98	28.82	28.80	28.69
Mobile Homes .....	6.57	7.11	7.10	7.10	7.86	7.87	7.86	8.11	8.11	8.12
<b>Total .....</b>	<b>106.27</b>	<b>117.42</b>	<b>117.38</b>	<b>117.33</b>	<b>129.08</b>	<b>129.10</b>	<b>128.82</b>	<b>134.55</b>	<b>134.54</b>	<b>134.22</b>
<b>Average House Square Footage .....</b>	<b>1685</b>	<b>1740</b>	<b>1740</b>	<b>1740</b>	<b>1782</b>	<b>1782</b>	<b>1782</b>	<b>1798</b>	<b>1798</b>	<b>1798</b>
<b>Energy Intensity</b>										
<b>(million Btu per household)</b>										
Delivered Energy Consumption .....	102.9	106.0	105.1	104.6	104.4	103.5	97.1	104.6	101.8	93.9
Total Energy Consumption .....	189.0	194.3	193.4	191.8	189.9	190.0	171.7	189.5	187.5	166.2
<b>(thousand Btu per square foot)</b>										
Delivered Energy Consumption .....	61.1	60.9	60.4	60.1	58.6	58.1	54.5	58.2	56.6	52.2
Total Energy Consumption .....	112.2	111.7	111.2	110.2	106.6	106.6	96.3	105.4	104.2	92.4
<b>Delivered Energy Consumption by Fuel</b>										
<b>Electricity</b>										
Space Heating .....	0.39	0.46	0.46	0.45	0.50	0.50	0.45	0.52	0.51	0.44
Space Cooling .....	0.52	0.60	0.60	0.59	0.65	0.65	0.58	0.69	0.67	0.58
Water Heating .....	0.45	0.47	0.47	0.46	0.44	0.44	0.37	0.44	0.43	0.32
Refrigeration .....	0.42	0.34	0.34	0.34	0.32	0.32	0.32	0.33	0.33	0.33
Cooking .....	0.10	0.11	0.11	0.11	0.12	0.12	0.12	0.13	0.13	0.13
Clothes Dryers .....	0.22	0.25	0.25	0.24	0.27	0.26	0.25	0.28	0.27	0.25
Freezers .....	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Lighting .....	0.74	0.93	0.93	0.90	1.03	1.02	0.77	1.07	1.03	0.68
Clothes Washers <sup>1</sup> .....	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Dishwashers <sup>1</sup> .....	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
Color Televisions .....	0.13	0.20	0.19	0.19	0.25	0.25	0.23	0.27	0.26	0.24
Personal Computers .....	0.06	0.08	0.08	0.08	0.10	0.10	0.10	0.11	0.11	0.11
Furnace Fans .....	0.07	0.09	0.09	0.09	0.10	0.10	0.09	0.11	0.10	0.10
Other Uses <sup>2</sup> .....	0.83	1.26	1.25	1.24	1.66	1.65	1.52	1.87	1.84	1.66
<b>Delivered Energy .....</b>	<b>4.10</b>	<b>4.93</b>	<b>4.91</b>	<b>4.85</b>	<b>5.60</b>	<b>5.57</b>	<b>4.96</b>	<b>5.95</b>	<b>5.86</b>	<b>4.97</b>
<b>Natural Gas</b>										
Space Heating .....	3.13	3.70	3.64	3.63	4.10	4.03	3.83	4.30	4.08	3.88
Space Cooling .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Heating .....	1.48	1.55	1.53	1.53	1.59	1.57	1.54	1.65	1.58	1.56
Cooking .....	0.20	0.23	0.22	0.22	0.25	0.25	0.25	0.26	0.26	0.26
Clothes Dryers .....	0.06	0.08	0.08	0.08	0.10	0.10	0.09	0.10	0.10	0.10
Other Uses <sup>3</sup> .....	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.07	0.10
<b>Delivered Energy .....</b>	<b>4.94</b>	<b>5.63</b>	<b>5.55</b>	<b>5.54</b>	<b>6.10</b>	<b>6.01</b>	<b>5.77</b>	<b>6.38</b>	<b>6.09</b>	<b>5.89</b>
<b>Distillate</b>										
Space Heating .....	0.74	0.76	0.76	0.76	0.71	0.71	0.71	0.69	0.69	0.69
Water Heating .....	0.16	0.14	0.14	0.14	0.12	0.12	0.12	0.11	0.11	0.12
Other Uses <sup>4</sup> .....	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<b>Delivered Energy .....</b>	<b>0.91</b>	<b>0.91</b>	<b>0.91</b>	<b>0.91</b>	<b>0.84</b>	<b>0.84</b>	<b>0.84</b>	<b>0.81</b>	<b>0.81</b>	<b>0.81</b>
<b>Liquefied Petroleum Gas</b>										
Space Heating .....	0.26	0.25	0.25	0.25	0.24	0.24	0.24	0.24	0.24	0.24
Water Heating .....	0.09	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06
Cooking .....	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Other Uses <sup>3</sup> .....	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.14
<b>Delivered Energy .....</b>	<b>0.50</b>	<b>0.47</b>	<b>0.47</b>	<b>0.47</b>	<b>0.46</b>	<b>0.46</b>	<b>0.46</b>	<b>0.46</b>	<b>0.47</b>	<b>0.47</b>
Marketed Renewables (wood) <sup>5</sup> .....	0.39	0.41	0.41	0.41	0.41	0.40	0.40	0.40	0.40	0.40
Other Fuels <sup>5</sup> .....	0.11	0.09	0.09	0.09	0.08	0.08	0.08	0.07	0.07	0.07

**Table I6. Residential Sector Key Indicators and End-Use Consumption (Continued)**  
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Delivered Energy Consumption by End-Use</b>										
Space Heating .....	5.01	5.68	5.61	5.60	6.04	5.96	5.71	6.22	6.00	5.72
Space Cooling .....	0.52	0.60	0.60	0.59	0.65	0.65	0.58	0.69	0.67	0.58
Water Heating .....	2.19	2.24	2.22	2.21	2.21	2.19	2.09	2.26	2.19	2.05
Refrigeration .....	0.42	0.34	0.34	0.34	0.32	0.32	0.32	0.33	0.33	0.33
Cooking .....	0.33	0.36	0.36	0.36	0.39	0.39	0.39	0.40	0.40	0.40
Clothes Dryers .....	0.28	0.33	0.33	0.33	0.36	0.36	0.34	0.38	0.37	0.35
Freezers .....	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Lighting .....	0.74	0.93	0.93	0.90	1.03	1.02	0.77	1.07	1.03	0.68
Clothes Washers .....	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Dishwashers .....	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
Color Televisions .....	0.13	0.20	0.19	0.19	0.25	0.25	0.23	0.27	0.26	0.24
Personal Computers .....	0.06	0.08	0.08	0.08	0.10	0.10	0.10	0.11	0.11	0.11
Furnace Fans .....	0.07	0.09	0.09	0.09	0.10	0.10	0.09	0.11	0.10	0.10
Other Uses <sup>7</sup> .....	1.01	1.46	1.45	1.44	1.87	1.87	1.74	2.09	2.06	1.90
<b>Delivered Energy .....</b>	<b>10.94</b>	<b>12.45</b>	<b>12.34</b>	<b>12.27</b>	<b>13.48</b>	<b>13.36</b>	<b>12.51</b>	<b>14.08</b>	<b>13.69</b>	<b>12.61</b>
<b>Electricity Related Losses .....</b>	<b>9.15</b>	<b>10.37</b>	<b>10.37</b>	<b>10.23</b>	<b>11.03</b>	<b>11.17</b>	<b>9.60</b>	<b>11.42</b>	<b>11.53</b>	<b>9.70</b>
<b>Total Energy Consumption by End-Use</b>										
Space Heating .....	5.89	6.64	6.58	6.55	7.03	6.97	6.58	7.22	7.01	6.58
Space Cooling .....	1.68	1.86	1.86	1.84	1.94	1.95	1.71	2.00	2.00	1.72
Water Heating .....	3.20	3.23	3.21	3.19	3.08	3.08	2.81	3.10	3.05	2.67
Refrigeration .....	1.36	1.06	1.06	1.06	0.96	0.97	0.94	0.97	0.98	0.97
Cooking .....	0.55	0.59	0.59	0.59	0.63	0.63	0.63	0.65	0.65	0.65
Clothes Dryers .....	0.78	0.85	0.85	0.84	0.89	0.89	0.81	0.91	0.91	0.83
Freezers .....	0.36	0.28	0.28	0.28	0.26	0.27	0.26	0.27	0.27	0.27
Lighting .....	2.40	2.90	2.89	2.81	3.06	3.06	2.26	3.12	3.07	2.00
Clothes Washers .....	0.10	0.10	0.10	0.10	0.09	0.09	0.08	0.08	0.08	0.08
Dishwashers .....	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.09	0.08
Color Televisions .....	0.43	0.61	0.61	0.60	0.75	0.76	0.69	0.78	0.78	0.71
Personal Computers .....	0.19	0.25	0.25	0.25	0.31	0.31	0.30	0.33	0.34	0.33
Furnace Fans .....	0.23	0.27	0.27	0.27	0.30	0.30	0.27	0.31	0.31	0.28
Other Uses <sup>7</sup> .....	2.86	4.10	4.10	4.05	5.14	5.18	4.68	5.67	5.69	5.14
<b>Total .....</b>	<b>20.08</b>	<b>22.82</b>	<b>22.70</b>	<b>22.50</b>	<b>24.51</b>	<b>24.53</b>	<b>22.11</b>	<b>25.50</b>	<b>25.22</b>	<b>22.31</b>
<b>Non-Marketed Renewables</b>										
Geothermal <sup>8</sup> .....	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Solar <sup>9</sup> .....	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.05
<b>Total .....</b>	<b>0.03</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>

<sup>1</sup>Does not include electric water heating portion of load.  
<sup>2</sup>Includes small electric devices, heating elements, and motors.  
<sup>3</sup>Includes such appliances as swimming pool heaters, outdoor grills, and outdoor lighting (natural gas).  
<sup>4</sup>Includes such appliances as swimming pool and hot tub heaters.  
<sup>5</sup>Includes wood used for primary and secondary heating in wood stoves or fireplaces as reported in the *Residential Energy Consumption Survey 1997*.  
<sup>6</sup>Includes kerosene and coal.  
<sup>7</sup>Includes all other uses listed above.  
<sup>8</sup>Includes primary energy displaced by geothermal heat pumps in space heating and cooling applications.  
<sup>9</sup>Includes primary energy displaced by solar thermal water heaters and electricity generated using photovoltaics.  
Btu = British thermal unit.  
Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports.  
**Sources:** 2001 based on: Energy Information Administration (EIA), *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002). **Projections:** EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table 17. Commercial Sector Key Indicators and Consumption**  
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Key Indicators</b>										
<b>Total Floorspace (billion square feet)</b>										
Surviving .....	66.6	79.0	78.9	78.9	91.2	91.1	90.7	97.4	97.3	96.9
New Additions .....	3.6	3.0	3.0	3.0	3.4	3.4	3.4	3.4	3.3	3.4
<b>Total .....</b>	<b>70.2</b>	<b>82.0</b>	<b>81.9</b>	<b>81.9</b>	<b>94.6</b>	<b>94.5</b>	<b>94.1</b>	<b>100.8</b>	<b>100.7</b>	<b>100.3</b>
<b>Energy Consumption Intensity (thousand Btu per square foot)</b>										
Delivered Energy Consumption .....	118.4	117.8	116.8	116.2	119.8	119.0	113.6	121.3	118.5	115.4
Electricity Related Losses .....	129.9	128.5	128.5	127.1	128.5	130.2	115.4	129.1	131.0	115.2
Total Energy Consumption .....	248.3	246.2	245.3	243.3	248.3	249.2	229.0	250.4	249.5	230.5
<b>Delivered Energy Consumption by Fuel</b>										
<b>Purchased Electricity</b>										
Space Heating <sup>1</sup> .....	0.14	0.16	0.15	0.15	0.15	0.15	0.14	0.15	0.15	0.13
Space Cooling <sup>1</sup> .....	0.43	0.43	0.42	0.42	0.45	0.45	0.41	0.46	0.46	0.39
Water Heating <sup>1</sup> .....	0.15	0.16	0.15	0.15	0.16	0.15	0.14	0.15	0.15	0.13
Ventilation .....	0.17	0.18	0.18	0.18	0.19	0.19	0.17	0.19	0.19	0.16
Cooking .....	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
Lighting .....	1.02	1.21	1.19	1.16	1.30	1.28	0.96	1.33	1.28	0.86
Refrigeration .....	0.21	0.24	0.24	0.23	0.26	0.26	0.24	0.27	0.27	0.23
Office Equipment (PC) .....	0.16	0.24	0.24	0.24	0.32	0.32	0.31	0.36	0.36	0.34
Office Equipment (non-PC) .....	0.31	0.47	0.47	0.47	0.75	0.74	0.72	0.92	0.92	0.87
Other Uses <sup>2</sup> .....	1.46	1.90	1.90	1.90	2.57	2.56	2.50	2.92	2.91	2.80
<b>Delivered Energy .....</b>	<b>4.08</b>	<b>5.01</b>	<b>4.98</b>	<b>4.93</b>	<b>6.17</b>	<b>6.14</b>	<b>5.60</b>	<b>6.79</b>	<b>6.70</b>	<b>5.92</b>
<b>Natural Gas</b>										
Space Heating <sup>1</sup> .....	1.32	1.53	1.50	1.50	1.65	1.60	1.50	1.71	1.60	1.44
Space Cooling <sup>1</sup> .....	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.03	0.03
Water Heating <sup>1</sup> .....	0.57	0.69	0.68	0.68	0.81	0.79	0.74	0.86	0.82	0.73
Cooking .....	0.25	0.30	0.30	0.30	0.35	0.34	0.32	0.37	0.35	0.33
Other Uses <sup>3</sup> .....	1.17	1.20	1.18	1.18	1.39	1.38	1.51	1.52	1.45	2.06
<b>Delivered Energy .....</b>	<b>3.33</b>	<b>3.74</b>	<b>3.67</b>	<b>3.67</b>	<b>4.23</b>	<b>4.14</b>	<b>4.09</b>	<b>4.50</b>	<b>4.24</b>	<b>4.60</b>
<b>Distillate</b>										
Space Heating <sup>1</sup> .....	0.17	0.24	0.24	0.24	0.25	0.28	0.30	0.25	0.29	0.33
Water Heating <sup>1</sup> .....	0.07	0.08	0.08	0.08	0.08	0.08	0.09	0.08	0.08	0.10
Other Uses <sup>4</sup> .....	0.22	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.19	0.21
<b>Delivered Energy .....</b>	<b>0.46</b>	<b>0.51</b>	<b>0.52</b>	<b>0.52</b>	<b>0.52</b>	<b>0.55</b>	<b>0.58</b>	<b>0.52</b>	<b>0.57</b>	<b>0.63</b>
<b>Other Fuels<sup>5</sup> .....</b>	<b>0.34</b>	<b>0.29</b>	<b>0.28</b>	<b>0.29</b>	<b>0.30</b>	<b>0.30</b>	<b>0.31</b>	<b>0.31</b>	<b>0.31</b>	<b>0.31</b>
<b>Marketed Renewable Fuels</b>										
Biomass .....	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
<b>Delivered Energy .....</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>
<b>Delivered Energy Consumption by End-Use</b>										
Space Heating <sup>1</sup> .....	1.63	1.92	1.90	1.89	2.05	2.03	1.93	2.11	2.03	1.90
Space Cooling <sup>1</sup> .....	0.44	0.45	0.44	0.44	0.48	0.48	0.44	0.50	0.49	0.42
Water Heating <sup>1</sup> .....	0.79	0.92	0.91	0.91	1.04	1.03	0.96	1.09	1.05	0.96
Ventilation .....	0.17	0.18	0.18	0.18	0.19	0.19	0.17	0.19	0.19	0.16
Cooking .....	0.29	0.33	0.33	0.33	0.38	0.37	0.35	0.40	0.38	0.35
Lighting .....	1.02	1.21	1.19	1.16	1.30	1.28	0.96	1.33	1.28	0.86
Refrigeration .....	0.21	0.24	0.24	0.23	0.26	0.26	0.24	0.27	0.27	0.23
Office Equipment (PC) .....	0.16	0.24	0.24	0.24	0.32	0.32	0.31	0.36	0.36	0.34
Office Equipment (non-PC) .....	0.31	0.47	0.47	0.47	0.75	0.74	0.72	0.92	0.92	0.87
Other Uses <sup>6</sup> .....	3.30	3.69	3.67	3.67	4.56	4.54	4.62	5.05	4.96	5.48
<b>Delivered Energy .....</b>	<b>8.32</b>	<b>9.65</b>	<b>9.57</b>	<b>9.52</b>	<b>11.33</b>	<b>11.24</b>	<b>10.69</b>	<b>12.23</b>	<b>11.93</b>	<b>11.57</b>

**Table 17. Commercial Sector Key Indicators and Consumption (Continued)**  
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Electricity Related Losses</b> .....	<b>9.12</b>	<b>10.53</b>	<b>10.52</b>	<b>10.41</b>	<b>12.16</b>	<b>12.30</b>	<b>10.86</b>	<b>13.02</b>	<b>13.19</b>	<b>11.56</b>
<b>Total Energy Consumption by End-Use</b>										
Space Heating <sup>1</sup> .....	1.95	2.25	2.22	2.21	2.36	2.33	2.20	2.40	2.32	2.15
Space Cooling <sup>1</sup> .....	1.39	1.34	1.34	1.33	1.38	1.38	1.23	1.39	1.39	1.19
Water Heating <sup>1</sup> .....	1.12	1.25	1.24	1.23	1.35	1.34	1.24	1.39	1.35	1.21
Ventilation .....	0.55	0.56	0.56	0.55	0.56	0.56	0.49	0.57	0.57	0.46
Cooking .....	0.37	0.40	0.40	0.40	0.44	0.43	0.40	0.45	0.43	0.40
Lighting .....	3.31	3.74	3.71	3.61	3.86	3.86	2.81	3.88	3.80	2.53
Refrigeration .....	0.69	0.74	0.74	0.73	0.77	0.77	0.70	0.78	0.79	0.68
Office Equipment (PC) .....	0.52	0.75	0.75	0.75	0.95	0.96	0.91	1.05	1.06	1.00
Office Equipment (non-PC) .....	0.99	1.45	1.45	1.45	2.21	2.23	2.12	2.69	2.73	2.57
Other Uses <sup>6</sup> .....	6.56	7.70	7.68	7.67	9.62	9.67	9.46	10.65	10.68	10.94
<b>Total</b> .....	<b>17.44</b>	<b>20.19</b>	<b>20.09</b>	<b>19.92</b>	<b>23.50</b>	<b>23.55</b>	<b>21.55</b>	<b>25.25</b>	<b>25.12</b>	<b>23.13</b>
<b>Non-Marketed Renewable Fuels</b>										
Solar <sup>7</sup> .....	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
<b>Total</b> .....	<b>0.02</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>

<sup>1</sup>Includes fuel consumption for district services.

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

<sup>3</sup>Includes miscellaneous uses, such as pumps, emergency electric generators, combined heat and power in commercial buildings, and manufacturing performed in commercial buildings.

<sup>4</sup>Includes miscellaneous uses, such as cooking, emergency electric generators, and combined heat and power in commercial buildings.

<sup>5</sup>Includes residual fuel oil, liquefied petroleum gas, coal, motor gasoline, and kerosene.

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

<sup>7</sup>Includes primary energy displaced by solar thermal space heating and water heating, and electricity generation by solar photovoltaic systems.

Btu = British thermal unit.

PC = Personal computer.

Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports.

Sources: 2001 based on: Energy Information Administration (EIA), *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002). Projections: EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I8. Industrial Sector Key Indicators and Consumption**  
(Quadrillion Btu per Year, Unless Otherwise Noted)

Key Indicators and Consumption	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Key Indicators</b>										
<b>Value of Shipments (billion 1996 dollars)</b>										
Manufacturing .....	4079	5466	5450	5406	7226	7239	7155	8258	8226	8160
Nonmanufacturing .....	1346	1510	1502	1491	1744	1742	1703	1870	1850	1810
<b>Total .....</b>	<b>5425</b>	<b>6977</b>	<b>6951</b>	<b>6897</b>	<b>8969</b>	<b>8981</b>	<b>8858</b>	<b>10128</b>	<b>10075</b>	<b>9970</b>
<b>Energy Prices (2001 dollars per million Btu)</b>										
Electricity .....	14.13	12.82	13.22	14.78	13.37	13.71	19.75	13.48	14.64	22.03
Natural Gas .....	4.87	4.00	4.43	5.65	4.39	4.72	8.23	4.63	6.19	9.40
Steam Coal .....	1.46	1.39	1.39	3.50	1.31	1.34	6.00	1.30	1.33	6.59
Residual Oil .....	3.28	3.71	3.73	5.43	3.94	3.94	7.71	4.10	4.13	8.31
Distillate Oil .....	6.55	5.75	5.82	7.33	6.74	6.78	9.92	7.19	7.24	10.75
Liquefied Petroleum Gas .....	12.34	9.93	9.90	11.25	10.85	10.88	13.80	11.13	11.26	14.31
Motor Gasoline .....	11.57	11.40	11.42	13.02	11.52	11.53	14.64	12.05	12.02	15.21
Metallurgical Coal .....	1.69	1.50	1.51	3.61	1.39	1.39	6.17	1.34	1.33	6.74
<b>Energy Consumption<sup>1</sup></b>										
Purchased Electricity .....	3.39	3.97	3.97	3.88	4.65	4.69	4.44	5.01	5.05	4.72
Natural Gas .....	7.74	9.06	8.87	9.02	10.39	10.09	10.02	11.23	10.41	9.89
Lease and Plant Fuel <sup>2</sup> .....	1.20	1.37	1.32	1.34	1.60	1.49	1.54	1.73	1.51	1.51
Natural Gas Subtotal .....	8.94	10.43	10.19	10.36	11.98	11.58	11.56	12.96	11.92	11.40
Steam Coal .....	1.42	1.46	1.47	1.34	1.51	1.52	1.29	1.54	1.59	1.30
Metallurgical Coal and Coke <sup>3</sup> .....	0.74	0.77	0.77	0.76	0.71	0.71	0.65	0.68	0.67	0.60
Residual Fuel .....	0.23	0.19	0.19	0.18	0.20	0.20	0.18	0.20	0.23	0.19
Distillate .....	1.13	1.21	1.22	1.20	1.36	1.37	1.32	1.44	1.48	1.40
Liquefied Petroleum Gas .....	2.10	2.55	2.55	2.57	3.06	3.11	3.05	3.28	3.38	3.64
Petrochemical Feedstocks .....	1.14	1.44	1.43	1.40	1.70	1.70	1.52	1.82	1.81	1.57
Other Petroleum <sup>4</sup> .....	4.18	4.44	4.45	4.30	4.64	4.68	4.20	4.76	4.79	4.21
Renewables <sup>5</sup> .....	1.82	2.22	2.21	2.20	2.77	2.77	2.74	3.05	3.03	3.01
<b>Delivered Energy .....</b>	<b>25.10</b>	<b>28.67</b>	<b>28.45</b>	<b>28.19</b>	<b>32.58</b>	<b>32.32</b>	<b>30.96</b>	<b>34.75</b>	<b>33.95</b>	<b>32.05</b>
Electricity Related Losses .....	7.57	8.35	8.38	8.18	9.17	9.40	8.60	9.61	9.93	9.21
<b>Total .....</b>	<b>32.67</b>	<b>37.02</b>	<b>36.83</b>	<b>36.37</b>	<b>41.75</b>	<b>41.72</b>	<b>39.56</b>	<b>44.36</b>	<b>43.88</b>	<b>41.26</b>
<b>Energy Consumption per dollar of Shipments<sup>1</sup> (thousand Btu per 1996 dollars)</b>										
Purchased Electricity .....	0.63	0.57	0.57	0.56	0.52	0.52	0.50	0.49	0.50	0.47
Natural Gas .....	1.43	1.30	1.28	1.31	1.16	1.12	1.13	1.11	1.03	0.99
Lease and Plant Fuel <sup>2</sup> .....	0.22	0.20	0.19	0.19	0.18	0.17	0.17	0.17	0.15	0.15
Natural Gas Subtotal .....	1.65	1.49	1.47	1.50	1.34	1.29	1.30	1.28	1.18	1.14
Steam Coal .....	0.26	0.21	0.21	0.19	0.17	0.17	0.15	0.15	0.16	0.13
Metallurgical Coal and Coke <sup>3</sup> .....	0.14	0.11	0.11	0.11	0.08	0.08	0.07	0.07	0.07	0.06
Residual Fuel .....	0.04	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02
Distillate .....	0.21	0.17	0.18	0.17	0.15	0.15	0.15	0.14	0.15	0.14
Liquefied Petroleum Gas .....	0.39	0.37	0.37	0.37	0.34	0.35	0.34	0.32	0.34	0.37
Petrochemical Feedstocks .....	0.21	0.21	0.21	0.20	0.19	0.19	0.17	0.18	0.18	0.16
Other Petroleum <sup>4</sup> .....	0.77	0.64	0.64	0.62	0.52	0.52	0.47	0.47	0.48	0.42
Renewables <sup>5</sup> .....	0.33	0.32	0.32	0.32	0.31	0.31	0.31	0.30	0.30	0.30
<b>Delivered Energy .....</b>	<b>4.63</b>	<b>4.11</b>	<b>4.09</b>	<b>4.09</b>	<b>3.63</b>	<b>3.60</b>	<b>3.50</b>	<b>3.43</b>	<b>3.37</b>	<b>3.21</b>
Electricity Related Losses .....	1.40	1.20	1.21	1.19	1.02	1.05	0.97	0.95	0.99	0.92
<b>Total .....</b>	<b>6.02</b>	<b>5.31</b>	<b>5.30</b>	<b>5.27</b>	<b>4.65</b>	<b>4.65</b>	<b>4.47</b>	<b>4.38</b>	<b>4.35</b>	<b>4.14</b>

<sup>1</sup>Fuel consumption includes energy for combined heat and power plants, except those whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>2</sup>Represents natural gas used in the field gathering and processing plant machinery.

<sup>3</sup>Includes net coal coke imports.

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

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

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports.

Sources: 2001 prices for motor gasoline and distillate are based on: Energy Information Administration (EIA), *Petroleum Marketing Annual 2001*, [http://www.eia.doe.gov/pub/oil\\_gas/petroleum/data\\_publications/petroleum\\_marketing\\_annual/current/pdf/pmaall.pdf](http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/petroleum_marketing_annual/current/pdf/pmaall.pdf) (September 2002). 2001 coal prices are based on EIA, *Quarterly Coal Report, October-December 2001*, DOE/EIA-0121(2001/4Q) (Washington, DC, May 2002) and EIA, AEO2003 National Energy Modeling System run MLBILL.D050503A. 2001 electricity prices: EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002). 2001 natural gas prices based on: EIA, *Manufacturing Energy Consumption Survey 1998*. 2001 consumption values based on: EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002). 2001 shipments: Global Insight macroeconomic model CTL0802. Projections: EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I9. Transportation Sector Key Indicators and Delivered Energy Consumption**

Key Indicators and Consumption	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Key Indicators</b>										
<b>Level of Travel (billions)</b>										
Light-Duty Vehicles <8,500 pounds (VMT) .	2409	3006	3001	2967	3752	3752	3524	4133	4121	3779
Commercial Light Trucks (VMT) <sup>1</sup> . . . . .	66	84	84	83	107	107	104	120	119	115
Freight Trucks >10,000 pounds (VMT) . . . . .	206	265	264	262	339	339	335	382	379	376
Air (seat miles available) . . . . .	1109	1356	1356	1344	1944	1946	1928	2258	2260	2231
Rail (ton miles traveled) . . . . .	1448	1691	1692	1595	2003	2072	1553	2173	2263	1614
Domestic Shipping (ton miles traveled) . . . . .	788	882	865	852	1012	990	913	1088	1046	947
<b>Energy Efficiency Indicators</b>										
New Light-Duty Vehicle (miles per gallon) <sup>2</sup> .	24.1	25.1	25.1	25.3	26.0	26.0	28.3	26.4	26.4	29.2
New Car (miles per gallon) <sup>2</sup> . . . . .	28.1	28.5	28.5	28.8	29.7	29.8	32.8	30.1	30.0	33.1
New Light Truck (miles per gallon) <sup>2</sup> . . . . .	20.7	22.3	22.3	22.5	23.1	23.1	24.8	23.5	23.6	26.0
Light-Duty Fleet (miles per gallon) <sup>3</sup> . . . . .	19.8	19.6	19.6	19.6	20.3	20.3	21.0	20.5	20.6	21.9
New Commercial Light Truck (MPG) <sup>1</sup> . . . . .	13.8	14.7	14.7	14.9	15.2	15.3	16.4	15.5	15.5	17.2
Stock Commercial Light Truck (MPG) <sup>1</sup> . . . . .	13.7	14.3	14.3	14.3	14.9	14.9	15.5	15.2	15.2	16.3
Aircraft Efficiency (seat miles per gallon) . . .	51.2	54.3	54.3	54.3	58.6	58.7	59.1	60.7	60.7	61.2
Freight Truck Efficiency (miles per gallon) . .	6.0	6.0	6.0	6.0	6.3	6.3	6.4	6.5	6.5	6.6
Rail Efficiency (ton miles per thousand Btu)	2.8	3.1	3.1	3.1	3.4	3.4	3.4	3.6	3.6	3.6
Domestic Shipping Efficiency (ton miles per thousand Btu) . . . . .	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4
<b>Energy Use by Mode (quadrillion Btu)</b>										
Light-Duty Vehicles . . . . .	15.28	18.88	18.85	18.81	22.76	22.75	20.78	24.71	24.63	21.35
Commercial Light Trucks <sup>1</sup> . . . . .	0.60	0.73	0.73	0.73	0.89	0.90	0.84	0.98	0.98	0.89
Freight Trucks <sup>4</sup> . . . . .	4.68	5.92	5.90	5.86	7.11	7.12	6.93	7.81	7.77	7.52
Air <sup>5</sup> . . . . .	3.47	3.98	3.98	3.94	5.15	5.15	5.07	5.73	5.73	5.63
Rail <sup>6</sup> . . . . .	0.63	0.68	0.68	0.65	0.75	0.77	0.61	0.78	0.81	0.62
Marine <sup>7</sup> . . . . .	1.45	1.49	1.49	1.48	1.59	1.58	1.55	1.64	1.62	1.58
Pipeline Fuel . . . . .	0.63	0.78	0.73	0.74	0.94	0.84	0.91	1.03	0.87	0.93
Lubricants . . . . .	0.19	0.22	0.22	0.21	0.26	0.26	0.26	0.28	0.28	0.28
<b>Total</b> . . . . .	<b>26.94</b>	<b>32.68</b>	<b>32.57</b>	<b>32.43</b>	<b>39.45</b>	<b>39.36</b>	<b>36.95</b>	<b>42.96</b>	<b>42.69</b>	<b>38.79</b>
<b>Energy Use by Mode (million barrels per day oil equivalent)</b>										
Light-Duty Vehicles . . . . .	8.05	9.93	9.91	9.94	11.96	11.95	10.97	12.98	12.94	11.26
Commercial Light Trucks <sup>1</sup> . . . . .	0.32	0.39	0.39	0.38	0.47	0.47	0.44	0.52	0.52	0.47
Freight Trucks . . . . .	2.05	2.61	2.60	2.58	3.16	3.17	3.08	3.49	3.47	3.36
Railroad . . . . .	0.24	0.26	0.26	0.24	0.28	0.29	0.21	0.28	0.30	0.21
Domestic Shipping . . . . .	0.16	0.17	0.17	0.17	0.20	0.19	0.18	0.21	0.20	0.18
International Shipping . . . . .	0.34	0.33	0.33	0.33	0.34	0.34	0.34	0.34	0.34	0.34
Air <sup>5</sup> . . . . .	1.44	1.65	1.65	1.64	2.19	2.19	2.15	2.45	2.45	2.40
Military Use . . . . .	0.30	0.34	0.34	0.34	0.38	0.38	0.38	0.40	0.40	0.40
Bus Transportation . . . . .	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Rail Transportation <sup>6</sup> . . . . .	0.05	0.06	0.06	0.06	0.08	0.08	0.08	0.08	0.08	0.08
Recreational Boats . . . . .	0.16	0.18	0.18	0.18	0.19	0.19	0.19	0.20	0.20	0.20
Lubricants . . . . .	0.09	0.10	0.10	0.10	0.12	0.12	0.12	0.13	0.13	0.13
Pipeline Fuel . . . . .	0.32	0.39	0.37	0.38	0.47	0.43	0.46	0.52	0.44	0.47
<b>Total</b> . . . . .	<b>13.64</b>	<b>16.54</b>	<b>16.49</b>	<b>16.47</b>	<b>19.97</b>	<b>19.92</b>	<b>18.72</b>	<b>21.74</b>	<b>21.60</b>	<b>19.62</b>

<sup>1</sup>Commercial trucks 8,500 to 10,000 pounds.  
<sup>2</sup>Environmental Protection Agency rated miles per gallon.  
<sup>3</sup>Combined car and light truck "on-the-road" estimate.  
<sup>4</sup>Includes energy use by buses and military distillate consumption.  
<sup>5</sup>Includes jet fuel and aviation gasoline.  
<sup>6</sup>Includes passenger rail.  
<sup>7</sup>Includes military residual fuel use and recreational boats.  
 Btu = British thermal unit.  
 VMT=Vehicle miles traveled.  
 MPG = Miles per gallon.

Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports.

Sources: 2001: Energy Information Administration (EIA), *Natural Gas Annual 2000*, DOE/EIA-0131(2000) (Washington, DC, November 2001); Federal Highway Administration, *Highway Statistics 2000* (Washington, DC, November 2001); Oak Ridge National Laboratory, *Transportation Energy Data Book: Edition 22 and Annual* (Oak Ridge, TN, September 2002); National Highway Traffic and Safety Administration, *Summary of Fuel Economy Performance* (Washington, DC, February 2000); EIA, *Household Vehicle Energy Consumption 1994*, DOE/EIA-0464(94) (Washington, DC, August 1997); U.S. Department of Commerce, Bureau of the Census, "Vehicle Inventory and Use Survey" EC97TV (Washington, DC, October 1999); 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](http://www.eia.doe.gov/cneaf/alt_trans98/table1.html); EIA, *State Energy Data Report 1999*, DOE/EIA-0214(99) (Washington, DC, May 2001); U.S. Department of Transportation, Research and Special Programs Administration, *Air Carrier Statistics Monthly, December 2001/2000* (Washington, DC, 2001); EIA, *Fuel Oil and Kerosene Sales 2001*, [http://www.eia.doe.gov/oil\\_gas/petroleum/data\\_publications/fuel\\_oil\\_and\\_kerosene\\_sales/historical/foks.html](http://www.eia.doe.gov/oil_gas/petroleum/data_publications/fuel_oil_and_kerosene_sales/historical/foks.html); and United States Department of Defense, Defense Fuel Supply Center. Projections: EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I10. Electricity Supply, Disposition, Prices, and Emissions**  
(Billion Kilowatthours, Unless Otherwise Noted)

Supply, Disposition, and Prices	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Generation by Fuel Type</b>										
<b>Electric Power Sector<sup>1</sup></b>										
<b>Power Only<sup>2</sup></b>										
Coal .....	1848	2237	2246	1986	2512	2785	1213	2747	3160	1105
Petroleum .....	113	40	53	24	47	50	24	52	153	44
Natural Gas <sup>3</sup> .....	411	671	634	705	1143	872	1238	1314	780	961
Nuclear Power .....	769	790	790	801	793	793	939	793	793	1311
Pumped Storage/Other .....	-9	-1	-1	-1	-1	-1	-1	-1	-1	-1
Renewable Sources <sup>4</sup> .....	258	394	395	541	414	418	1081	423	429	1301
Distributed Generation (Natural Gas) ..	0	1	1	3	5	5	7	8	7	7
Non-Utility Generation for Own Use ..	-21	-24	-24	-27	-24	-24	-26	-24	-24	-25
<b>Total .....</b>	<b>3370</b>	<b>4107</b>	<b>4093</b>	<b>4032</b>	<b>4889</b>	<b>4898</b>	<b>4475</b>	<b>5312</b>	<b>5296</b>	<b>4704</b>
<b>Combined Heat and Power<sup>5</sup></b>										
Coal .....	33	33	33	31	33	33	18	33	33	13
Petroleum .....	7	4	4	4	3	4	4	3	10	5
Natural Gas .....	124	171	171	160	156	152	110	149	133	98
Renewable Sources .....	5	4	4	4	4	4	4	4	4	4
Non-Utility Generation for Own Use ..	-9	-18	-18	-18	-18	-18	-17	-18	-18	-16
<b>Total .....</b>	<b>162</b>	<b>193</b>	<b>194</b>	<b>181</b>	<b>178</b>	<b>175</b>	<b>119</b>	<b>171</b>	<b>162</b>	<b>103</b>
<b>Net Available to the Grid .....</b>	<b>3532</b>	<b>4301</b>	<b>4287</b>	<b>4213</b>	<b>5067</b>	<b>5073</b>	<b>4594</b>	<b>5483</b>	<b>5458</b>	<b>4807</b>
<b>End-Use Sector Generation</b>										
<b>Combined Heat and Power<sup>6</sup></b>										
Coal .....	23	23	23	23	23	23	23	23	23	23
Petroleum .....	6	6	6	6	6	6	6	6	6	7
Natural Gas .....	84	105	99	117	142	123	178	174	139	280
Other Gaseous Fuels <sup>7</sup> .....	6	7	7	7	7	7	7	8	8	7
Renewable Sources <sup>4</sup> .....	31	40	40	39	51	51	50	56	56	55
Other <sup>8</sup> .....	11	11	11	11	11	11	11	11	11	11
<b>Total .....</b>	<b>160</b>	<b>192</b>	<b>186</b>	<b>204</b>	<b>240</b>	<b>222</b>	<b>276</b>	<b>278</b>	<b>243</b>	<b>383</b>
Other End-Use Generators <sup>9</sup> .....	4	5	5	5	6	6	6	6	6	7
Generation for Own Use .....	-138	-154	-151	-169	-183	-173	-224	-207	-187	-294
<b>Total Sales to the Grid .....</b>	<b>27</b>	<b>43</b>	<b>40</b>	<b>40</b>	<b>63</b>	<b>54</b>	<b>58</b>	<b>78</b>	<b>62</b>	<b>96</b>
<b>Net Imports .....</b>	<b>20</b>	<b>30</b>	<b>32</b>	<b>45</b>	<b>16</b>	<b>15</b>	<b>64</b>	<b>6</b>	<b>7</b>	<b>38</b>
<b>Electricity Sales by Sector</b>										
Residential .....	1201	1445	1439	1422	1640	1632	1452	1745	1717	1457
Commercial .....	1197	1468	1460	1446	1808	1799	1643	1990	1965	1736
Industrial .....	994	1164	1163	1137	1364	1374	1301	1469	1479	1384
Transportation .....	22	27	27	27	36	36	35	42	41	39
<b>Total .....</b>	<b>3414</b>	<b>4104</b>	<b>4089</b>	<b>4032</b>	<b>4848</b>	<b>4842</b>	<b>4431</b>	<b>5246</b>	<b>5202</b>	<b>4617</b>
<b>End-Use Prices<sup>10</sup></b> (2001 cents per kilowatthour)										
Residential .....	8.7	7.7	7.8	8.4	7.9	8.0	10.9	7.9	8.4	12.0
Commercial .....	7.9	6.8	6.9	7.5	7.2	7.3	9.9	7.2	7.8	11.1
Industrial .....	4.8	4.4	4.5	5.0	4.6	4.7	6.7	4.6	5.0	7.5
Transportation .....	7.5	6.5	6.7	7.3	6.3	6.4	8.7	6.1	6.5	9.3
<b>All Sectors Average .....</b>	<b>7.3</b>	<b>6.4</b>	<b>6.6</b>	<b>7.1</b>	<b>6.7</b>	<b>6.8</b>	<b>9.3</b>	<b>6.7</b>	<b>7.2</b>	<b>10.3</b>
<b>Prices by Service Category<sup>10</sup></b> (2001 cents per kilowatthour)										
Generation .....	4.7	3.9	4.0	4.6	4.2	4.3	6.6	4.2	4.7	7.6
Transmission .....	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.8
Distribution .....	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	2.0



**Table I10. Electricity Supply, Disposition, Prices, and Emissions (Continued)**  
(Billion Kilowatthours, Unless Otherwise Noted)

Supply, Disposition, and Prices	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Emissions</b>										
Sulfur Dioxide (million tons) . . . . .	10.63	9.69	9.69	9.97	8.95	8.94	8.25	8.95	8.94	5.03
Nitrogen Oxide (million tons) . . . . .	4.75	3.90	3.91	3.60	4.02	4.06	1.90	4.08	4.11	1.05
Mercury (tons) . . . . .	53.52	53.60	53.51	50.11	54.05	53.65	25.32	54.82	54.19	14.81

<sup>1</sup>Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public.  
<sup>2</sup>Includes plants that only produce electricity.  
<sup>3</sup>Includes electricity generation from fuel cells.  
<sup>4</sup>Includes conventional hydroelectric, geothermal, wood, wood waste, municipal solid waste, landfill gas, other biomass, solar, and wind power.  
<sup>5</sup>Includes combined heat and power plants whose primary business is to sell electricity and heat to the public (i.e., those that report NAICS code 22).  
<sup>6</sup>Includes combined heat and power plants and electricity-only plants in the commercial and industrial sectors.  
<sup>7</sup>Other gaseous fuels include refinery and still gas.  
<sup>8</sup>Other includes batteries, chemicals, hydrogen, pitch, purchased steam, sulfur and miscellaneous technologies.  
<sup>9</sup>Other end-use generators include 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.  
<sup>10</sup>Prices represent average revenue per kilowatthour.  
 Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports.  
**Source:** 2001 power only and combined heat and power generation, sales to utilities, net imports, residential, industrial, and total electricity sales, and emissions: Energy Information Administration (EIA), *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002), and supporting databases. 2001 commercial and transportation electricity sales: EIA estimates based on Oak Ridge National Laboratory, *Transportation Energy Data Book 21* (Oak Ridge, TN, September 2001). 2001 prices: EIA, National Energy Modeling System run MLBILL.D050503A. **Projections:** EIA, AEO2003 National Energy Modeling System run MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I11. Electricity Generating Capacity**  
(Gigawatts)

Net Summer Capacity <sup>1</sup>	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Electric Power Sector<sup>2</sup></b>										
<b>Power Only<sup>3</sup></b>										
Coal Steam	305.3	310.6	311.6	291.2	343.9	384.4	246.0	376.0	439.8	224.0
Other Fossil Steam <sup>4</sup>	133.8	77.9	77.5	81.3	71.9	70.6	63.2	71.1	69.2	58.4
Combined Cycle	43.2	148.4	144.2	163.1	233.0	199.2	278.6	278.1	224.1	293.6
Combustion Turbine/Diesel	97.6	126.4	127.6	121.7	148.0	139.7	119.0	164.3	157.0	118.5
Nuclear Power <sup>5</sup>	98.2	98.7	98.7	100.3	99.0	99.0	117.8	99.0	99.0	165.2
Pumped Storage	19.9	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3
Fuel Cells	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Renewable Sources <sup>6</sup>	90.4	97.2	97.3	136.9	101.0	102.0	246.0	102.6	104.1	275.1
Distributed Generation <sup>7</sup>	0.0	1.7	1.6	1.3	11.7	10.4	4.2	17.7	16.3	4.3
<b>Total</b>	<b>788.3</b>	<b>881.2</b>	<b>879.0</b>	<b>916.3</b>	<b>1029.0</b>	<b>1025.9</b>	<b>1095.3</b>	<b>1129.3</b>	<b>1130.1</b>	<b>1159.6</b>
<b>Combined Heat and Power<sup>8</sup></b>										
Coal Steam	5.2	4.7	4.7	4.6	4.7	4.7	3.3	4.7	4.7	2.6
Other Fossil Steam <sup>4</sup>	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Combined Cycle	22.6	32.9	32.9	32.9	32.9	32.9	32.9	32.9	32.9	32.9
Combustion Turbine/Diesel	4.6	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Renewable Sources <sup>6</sup>	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Total</b>	<b>33.7</b>	<b>44.3</b>	<b>44.3</b>	<b>44.2</b>	<b>44.3</b>	<b>44.3</b>	<b>42.9</b>	<b>44.3</b>	<b>44.3</b>	<b>42.2</b>
<b>Total Electric Power Industry</b>	<b>822.0</b>	<b>925.6</b>	<b>923.3</b>	<b>960.5</b>	<b>1073.4</b>	<b>1070.3</b>	<b>1138.2</b>	<b>1173.7</b>	<b>1174.4</b>	<b>1201.8</b>
<b>Cumulative Planned Additions<sup>9</sup></b>										
Coal Steam	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Fossil Steam <sup>4</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Combined Cycle	0.0	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1
Combustion Turbine/Diesel	0.0	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
Nuclear Power	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pumped Storage	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Fuel Cells	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Renewable Sources <sup>6</sup>	0.0	4.9	4.9	4.9	6.5	6.5	6.5	6.6	6.6	6.6
Distributed Generation <sup>7</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>0.0</b>	<b>120.0</b>	<b>120.0</b>	<b>120.0</b>	<b>121.7</b>	<b>121.7</b>	<b>121.7</b>	<b>121.8</b>	<b>121.8</b>	<b>121.8</b>
<b>Cumulative Unplanned Additions<sup>9</sup></b>										
Coal Steam	0.0	12.3	13.3	0.0	47.5	88.0	27.5	80.7	144.4	80.9
Other Fossil Steam <sup>4</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Combined Cycle	0.0	32.0	28.3	46.8	116.7	83.3	162.2	161.8	108.3	177.5
Combustion Turbine/Diesel	0.0	9.0	9.6	3.3	33.7	25.9	3.9	52.3	44.8	3.9
Nuclear Power	0.0	0.0	0.0	0.0	0.0	0.0	17.1	0.0	0.0	64.6
Pumped Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Renewable Sources <sup>6</sup>	0.0	1.5	1.6	41.2	3.8	4.7	148.8	5.2	6.8	177.7
Distributed Generation <sup>7</sup>	0.0	1.7	1.6	1.3	11.7	10.4	4.2	17.7	16.3	4.3
<b>Total</b>	<b>0.0</b>	<b>56.5</b>	<b>54.4</b>	<b>92.6</b>	<b>213.3</b>	<b>212.3</b>	<b>363.7</b>	<b>317.8</b>	<b>320.6</b>	<b>508.8</b>
<b>Cumulative Total Additions</b>	<b>0.0</b>	<b>176.6</b>	<b>174.4</b>	<b>212.7</b>	<b>334.9</b>	<b>334.0</b>	<b>485.4</b>	<b>439.5</b>	<b>442.4</b>	<b>630.6</b>
<b>Cumulative Retirements<sup>10</sup></b>										
Coal Steam	0.0	7.6	7.5	14.8	9.4	9.4	88.7	10.5	10.5	164.8
Other Fossil Steam <sup>4</sup>	0.0	54.4	54.8	51.0	60.4	61.6	69.1	61.2	63.1	73.9
Combined Cycle	0.0	0.7	1.2	0.7	0.7	1.2	0.7	0.7	1.2	0.9
Combustion Turbine/Diesel	0.0	11.2	10.6	10.2	14.3	14.8	13.5	16.7	16.4	14.1
Nuclear Power	0.0	2.4	2.4	0.8	3.4	3.4	1.8	3.4	3.4	1.8
Pumped Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cells	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Renewable Sources <sup>6</sup>	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<b>Total</b>	<b>0.0</b>	<b>76.5</b>	<b>76.6</b>	<b>77.6</b>	<b>88.3</b>	<b>90.5</b>	<b>173.9</b>	<b>92.6</b>	<b>94.7</b>	<b>255.6</b>

**Table I11. Electricity Generating Capacity (Continued)**  
(Gigawatts)

Net Summer Capacity <sup>1</sup>	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>End-Use Sector</b>										
Combined Heat and Power <sup>11</sup>										
Coal	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Petroleum	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1
Natural Gas	14.6	17.0	16.2	18.7	22.1	19.5	27.1	26.4	21.7	41.9
Other Gaseous Fuels	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2
Renewable Sources <sup>6</sup>	4.7	6.2	6.2	6.2	8.1	8.1	7.9	9.0	9.0	8.8
Other	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
<b>Total</b>	<b>27.8</b>	<b>31.8</b>	<b>31.0</b>	<b>33.4</b>	<b>38.8</b>	<b>36.3</b>	<b>43.7</b>	<b>44.2</b>	<b>39.5</b>	<b>59.5</b>
<b>Other End-Use Generators<sup>12</sup></b>										
Renewable Sources <sup>13</sup>	1.1	1.5	1.5	1.5	1.7	1.7	1.9	2.0	2.1	2.3
<b>Cumulative Additions<sup>9</sup></b>										
Combined Heat and Power <sup>11</sup>	0.0	4.1	3.4	5.7	11.1	8.7	15.9	16.6	11.9	31.8
Other End-Use Generators <sup>12</sup>	0.0	0.4	0.4	0.4	0.6	0.6	0.8	0.9	0.9	1.2

<sup>1</sup>Net summer capacity 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.

<sup>2</sup>Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>3</sup>Includes plants that only produce electricity. Includes capacity increases (uprates) at existing units.

<sup>4</sup>Includes oil-, gas-, and dual-fired capability.

<sup>5</sup>Nuclear capacity reflects operating capacity of existing units, including 4.3 gigawatts of uprates through 2025.

<sup>6</sup>Includes conventional hydroelectric, geothermal, wood, wood waste, municipal solid waste, landfill gas, other biomass, solar, and wind power.

<sup>7</sup>Primarily peak-load capacity fueled by natural gas

<sup>8</sup>Includes combined heat and power plants whose primary business is to sell electricity and heat to the public(i.e., those that report NAICS code 22).

<sup>9</sup>Cumulative additions after December 31, 2001.

<sup>10</sup>Cumulative total retirements after December 31, 2001.

<sup>11</sup>Includes combined heat and power plants and electricity-only plants in the commercial and industrial sectors.

<sup>12</sup>Other end-use generators include 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.

<sup>13</sup>See Table I17 for more detail.

Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model estimates and may differ slightly from official EIA data reports. Net summer capacity has been estimated for nonutility generators to be consistent with capability for electric utility generators.

Source: 2001 electric generating capacity and projected planned additions: Energy Information Administration (EIA), Form EIA-860: "Annual Electric Generator Report" (preliminary). Projections: EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I12. Petroleum Supply and Disposition Balance**  
(Million Barrels per Day, Unless Otherwise Noted)

Supply and Disposition	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Crude Oil</b>										
Domestic Crude Production <sup>1</sup>	5.80	5.64	5.33	5.30	5.43	5.03	4.99	5.30	4.70	4.67
Alaska	0.97	0.64	0.61	0.60	1.23	1.19	1.19	1.17	1.13	1.13
Lower 48 States	4.84	5.00	4.71	4.70	4.20	3.84	3.79	4.13	3.57	3.54
Net Imports	9.31	11.49	11.76	11.74	12.67	13.07	12.80	13.14	13.69	13.34
Gross Imports	9.33	11.56	11.81	11.79	12.73	13.11	12.84	13.18	13.72	13.37
Exports	0.02	0.06	0.05	0.05	0.05	0.04	0.04	0.05	0.02	0.02
Other Crude Supply <sup>2</sup>	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Crude Supply</b>	<b>15.13</b>	<b>17.13</b>	<b>17.08</b>	<b>17.04</b>	<b>18.10</b>	<b>18.10</b>	<b>17.79</b>	<b>18.44</b>	<b>18.40</b>	<b>18.02</b>
<b>Natural Gas Plant Liquids</b>	<b>1.87</b>	<b>2.20</b>	<b>2.09</b>	<b>2.13</b>	<b>2.48</b>	<b>2.16</b>	<b>2.27</b>	<b>2.59</b>	<b>2.12</b>	<b>2.14</b>
<b>Other Inputs<sup>3</sup></b>	<b>0.30</b>	<b>0.44</b>	<b>0.44</b>	<b>0.40</b>	<b>0.44</b>	<b>0.43</b>	<b>0.29</b>	<b>0.44</b>	<b>0.41</b>	<b>0.28</b>
<b>Refinery Processing Gain<sup>4</sup></b>	<b>0.90</b>	<b>0.91</b>	<b>0.91</b>	<b>0.90</b>	<b>0.96</b>	<b>0.97</b>	<b>0.95</b>	<b>0.96</b>	<b>0.98</b>	<b>0.93</b>
<b>Net Product Imports<sup>5</sup></b>	<b>1.59</b>	<b>2.17</b>	<b>2.37</b>	<b>2.02</b>	<b>4.88</b>	<b>5.30</b>	<b>3.78</b>	<b>6.48</b>	<b>7.49</b>	<b>5.20</b>
Gross Refined Product Imports <sup>6</sup>	2.08	2.55	2.73	2.47	4.89	5.31	3.77	6.51	7.59	5.26
Unfinished Oil Imports	0.38	0.63	0.64	0.54	1.07	1.06	1.06	1.08	1.07	1.01
Ether Imports	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exports	0.95	1.00	1.01	0.99	1.08	1.07	1.05	1.11	1.17	1.07
<b>Total Primary Supply<sup>7</sup></b>	<b>19.80</b>	<b>22.86</b>	<b>22.89</b>	<b>22.49</b>	<b>26.86</b>	<b>26.96</b>	<b>25.08</b>	<b>28.90</b>	<b>29.40</b>	<b>26.57</b>
<b>Refined Petroleum Products Supplied</b>										
Motor Gasoline <sup>8</sup>	8.67	10.54	10.52	10.39	12.53	12.53	11.36	13.55	13.50	11.66
Jet Fuel <sup>9</sup>	1.66	1.90	1.90	1.88	2.46	2.46	2.42	2.74	2.74	2.69
Distillate Fuel <sup>10</sup>	3.81	4.62	4.63	4.57	5.42	5.45	5.26	5.88	6.24	5.70
Residual Fuel	0.97	0.63	0.67	0.55	0.66	0.68	0.53	0.66	0.77	0.54
Other <sup>11</sup>	4.58	5.18	5.19	5.12	5.80	5.86	5.52	6.09	6.18	6.00
<b>Total</b>	<b>19.69</b>	<b>22.87</b>	<b>22.91</b>	<b>22.51</b>	<b>26.87</b>	<b>26.97</b>	<b>25.09</b>	<b>28.92</b>	<b>29.42</b>	<b>26.58</b>
<b>Refined Petroleum Products Supplied</b>										
Residential and Commercial	1.21	1.18	1.19	1.19	1.14	1.16	1.18	1.13	1.15	1.19
Industrial <sup>12</sup>	4.67	5.28	5.29	5.21	5.96	6.02	5.65	6.28	6.40	6.16
Transportation	13.27	16.19	16.16	15.98	19.53	19.54	18.14	21.25	21.19	19.03
Electric Power <sup>13</sup>	0.55	0.21	0.27	0.13	0.24	0.26	0.13	0.26	0.68	0.21
<b>Total</b>	<b>19.69</b>	<b>22.87</b>	<b>22.91</b>	<b>22.51</b>	<b>26.87</b>	<b>26.97</b>	<b>25.09</b>	<b>28.92</b>	<b>29.42</b>	<b>26.58</b>
<b>Discrepancy<sup>14</sup></b>	<b>0.10</b>	<b>-0.02</b>	<b>-0.02</b>	<b>-0.02</b>	<b>-0.02</b>	<b>-0.01</b>	<b>-0.01</b>	<b>-0.02</b>	<b>-0.02</b>	<b>-0.01</b>
<b>World Oil Price (2001 dollars per barrel)<sup>15</sup></b>	<b>22.01</b>	<b>23.99</b>	<b>23.99</b>	<b>23.77</b>	<b>25.48</b>	<b>25.48</b>	<b>24.15</b>	<b>26.57</b>	<b>26.57</b>	<b>24.58</b>
<b>Import Share of Product Supplied</b>	<b>0.55</b>	<b>0.60</b>	<b>0.62</b>	<b>0.61</b>	<b>0.65</b>	<b>0.68</b>	<b>0.66</b>	<b>0.68</b>	<b>0.72</b>	<b>0.70</b>
<b>Net Expenditures for Imported Crude Oil and Petroleum Products (billion 2001 dollars)</b>	<b>89.20</b>	<b>122.23</b>	<b>126.22</b>	<b>122.34</b>	<b>172.92</b>	<b>180.83</b>	<b>151.45</b>	<b>205.85</b>	<b>222.27</b>	<b>173.37</b>
<b>Domestic Refinery Distillation Capacity<sup>16</sup></b>	<b>16.8</b>	<b>18.7</b>	<b>18.7</b>	<b>18.7</b>	<b>19.5</b>	<b>19.5</b>	<b>19.1</b>	<b>19.8</b>	<b>19.8</b>	<b>19.4</b>
<b>Capacity Utilization Rate (percent)</b>	<b>93.0</b>	<b>93.1</b>	<b>93.0</b>	<b>92.9</b>	<b>94.6</b>	<b>94.6</b>	<b>94.6</b>	<b>94.6</b>	<b>94.6</b>	<b>94.6</b>

<sup>1</sup>Includes lease condensate.

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

<sup>3</sup>Includes alcohols, ethers, petroleum product stock withdrawals, domestic sources of blending components, other hydrocarbons, natural gas converted to liquid fuel, and coal converted to liquid fuel.

<sup>4</sup>Represents volumetric gain in refinery distillation and cracking processes.

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

<sup>6</sup>Includes other hydrocarbons, alcohols, and blending components.

<sup>7</sup>Total crude supply plus natural gas plant liquids, other inputs, refinery processing gain, and net product imports.

<sup>8</sup>Includes ethanol and ethers blended into gasoline.

<sup>9</sup>Includes only kerosene type.

<sup>10</sup>Includes distillate and kerosene.

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

<sup>12</sup>Includes consumption for combined heat and power, which produces electricity and other useful thermal energy.

<sup>13</sup>Includes consumption of energy by electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

<sup>14</sup>Balancing item. Includes unaccounted for supply, losses, and gains.

<sup>15</sup>Average refiner acquisition cost for imported crude oil.

<sup>16</sup>End-of-year capacity.

Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports.

Sources: 2001 product supplied based on: Energy Information Administration (EIA), *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002). Other 2001 data: EIA, *Petroleum Supply Annual 2001*, DOE/EIA-0340(2001)/1 (Washington, DC, June 2002). Projections: EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I13. Petroleum Product Prices**  
(2001 Cents per Gallon, Unless Otherwise Noted)

Sector and Fuel	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>World Oil Price (2001 dollars per barrel)</b>	<b>22.01</b>	<b>23.99</b>	<b>23.99</b>	<b>23.77</b>	<b>25.48</b>	<b>25.48</b>	<b>24.15</b>	<b>26.57</b>	<b>26.57</b>	<b>24.58</b>
<b>Delivered Sector Product Prices</b>										
<b>Residential</b>										
Distillate Fuel	124.6	110.9	111.8	109.9	120.7	121.1	114.8	123.8	123.9	119.0
Liquefied Petroleum Gas	127.3	123.1	122.8	121.9	131.1	131.1	127.7	133.1	134.4	128.5
<b>Commercial</b>										
Distillate Fuel	88.7	78.6	79.5	77.6	89.5	89.9	83.0	93.7	93.9	87.1
Residual Fuel	51.8	60.1	60.4	58.9	63.3	63.4	59.3	65.7	66.1	60.2
Residual Fuel (2001 dollars per barrel)	21.75	25.24	25.36	24.74	26.57	26.63	24.92	27.58	27.77	25.30
<b>Industrial<sup>1</sup></b>										
Distillate Fuel	90.8	79.7	80.7	78.8	93.4	94.0	85.9	99.7	100.4	90.6
Liquefied Petroleum Gas	105.9	85.2	84.9	84.3	93.1	93.3	90.7	95.4	96.6	91.5
Residual Fuel	49.1	55.6	55.8	54.8	58.9	59.0	55.4	61.4	61.9	56.4
Residual Fuel (2001 dollars per barrel)	20.61	23.35	23.44	23.01	24.75	24.80	23.27	25.77	25.99	23.68
<b>Transportation</b>										
Diesel Fuel (distillate) <sup>2</sup>	139.4	141.4	141.3	164.0	142.4	141.2	186.2	147.5	146.1	197.7
Jet Fuel <sup>3</sup>	83.7	76.3	76.9	96.8	85.6	85.6	127.7	90.7	90.8	138.0
Motor Gasoline <sup>4</sup>	143.3	141.8	142.1	161.7	143.1	143.1	181.8	149.4	149.1	188.7
Liquid Petroleum Gas	145.2	133.4	132.1	142.9	137.8	137.8	162.2	137.1	140.5	163.9
Residual Fuel	58.4	53.4	53.4	79.2	56.6	56.6	113.3	59.0	59.1	122.3
Residual Fuel (2001 dollars per barrel)	24.52	22.41	22.44	33.26	23.76	23.77	47.59	24.80	24.82	51.35
<b>Electric Power<sup>5</sup></b>										
Distillate Fuel	86.0	71.2	72.1	69.4	82.4	83.0	75.3	85.4	85.1	79.4
Residual Fuel	67.4	61.0	60.0	63.4	64.8	64.0	71.9	68.1	65.7	74.4
Residual Fuel (2001 dollars per barrel)	28.30	25.63	25.20	26.62	27.23	26.89	30.22	28.60	27.60	31.23
<b>Refined Petroleum Product Prices<sup>6</sup></b>										
Distillate Fuel	127.0	127.0	126.9	142.9	132.0	131.1	162.2	137.3	133.5	171.2
Jet Fuel <sup>3</sup>	83.7	76.3	76.9	96.8	85.6	85.6	127.7	90.7	90.8	138.0
Liquefied Petroleum Gas	110.3	92.2	91.9	91.5	99.3	99.4	97.4	101.3	102.4	97.4
Motor Gasoline <sup>4</sup>	143.4	141.8	142.1	161.5	143.1	143.1	181.3	149.4	149.1	188.1
Residual Fuel	61.5	55.9	55.9	72.4	59.3	59.3	97.7	61.9	62.0	104.3
Residual Fuel (2001 dollars per barrel)	25.85	23.48	23.50	30.40	24.92	24.91	41.04	26.02	26.04	43.81
<b>Average</b>	<b>123.6</b>	<b>122.0</b>	<b>122.0</b>	<b>137.8</b>	<b>125.7</b>	<b>125.5</b>	<b>155.9</b>	<b>131.1</b>	<b>129.9</b>	<b>161.5</b>
<b>Greenhouse Gas Allowance Cost</b>										
<b>Commercial</b>										
Distillate Fuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Residual Fuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Residual Fuel (2001 dollars per barrel)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Industrial<sup>1</sup></b>										
Distillate Fuel	0.0	0.0	0.0	22.8	0.0	0.0	51.6	0.0	0.0	58.5
Liquefied Petroleum Gas	0.0	0.0	0.0	12.2	0.0	0.0	27.6	0.0	0.0	31.3
Residual Fuel	0.0	0.0	0.0	26.5	0.0	0.0	60.0	0.0	0.0	68.1
Residual Fuel (2001 dollars per barrel)	0.00	0.00	0.00	11.15	0.00	0.00	25.21	0.00	0.00	28.58
<b>Electric Power<sup>5</sup></b>										
Distillate Fuel	0.0	0.0	0.0	22.8	0.0	0.0	51.6	0.0	0.0	58.5
Residual Fuel	0.0	0.0	0.0	26.5	0.0	0.0	60.0	0.0	0.0	68.1
Residual Fuel (2001 dollars per barrel)	0.00	0.00	0.00	11.15	0.00	0.00	25.21	0.00	0.00	28.58

**Table I13. Petroleum Product Prices (Continued)**  
(2001 Cents per Gallon, Unless Otherwise Noted)

Sector and Fuel	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Delivered Sector Product Prices with Greenhouse Gas Allowance Cost</b>										
<b>Commercial</b>										
Distillate Fuel .....	88.7	78.6	79.5	77.6	89.5	89.9	83.0	93.7	93.9	87.1
Residual Fuel .....	51.8	60.1	60.4	58.9	63.3	63.4	59.3	65.7	66.1	60.2
Residual Fuel (2001 dollars per barrel) .	21.75	25.24	25.36	24.74	26.57	26.63	24.92	27.58	27.77	25.30
<b>Industrial<sup>1</sup></b>										
Distillate Fuel .....	90.8	79.7	80.7	101.6	93.4	94.0	137.5	99.7	100.4	149.1
Liquefied Petroleum Gas .....	105.9	85.2	84.9	96.5	93.1	93.3	118.4	95.4	96.6	122.8
Residual Fuel .....	49.1	55.6	55.8	81.3	58.9	59.0	115.4	61.4	61.9	124.4
Residual Fuel (2001 dollars per barrel) .	20.61	23.35	23.44	34.16	24.75	24.80	48.47	25.77	25.99	52.26
<b>Electric Power<sup>5</sup></b>										
Distillate Fuel .....	86.0	71.2	72.1	92.3	82.4	83.0	126.9	85.4	85.1	138.0
Residual Fuel .....	67.4	61.0	60.0	89.9	64.8	64.0	132.0	68.1	65.7	142.4
Residual Fuel (2001 dollars per barrel) .	28.30	25.63	25.20	37.77	27.23	26.89	55.42	28.60	27.60	59.82

<sup>1</sup>Includes combined heat and power, which produces electricity and other useful thermal energy.

<sup>2</sup>Diesel fuel containing 500 part per million (ppm) or 15 ppm sulfur. Includes Federal and State taxes while excluding county and local taxes.

<sup>3</sup>Kerosene-type jet fuel.

<sup>4</sup>Sales weighted-average price for all grades. Includes Federal, State and local taxes.

<sup>5</sup>Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

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

Note: Data for 2001 are model results and may differ slightly from official EIA data reports.

**Sources:** 2001 prices for motor gasoline, distillate, and jet fuel are based on: EIA, *Petroleum Marketing Annual 2001*, [http://www.eia.doe.gov/pub/oil\\_gas/petroleum/data\\_publications/petroleum\\_marketing\\_annual/current/pdf/pmaall.pdf](http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/petroleum_marketing_annual/current/pdf/pmaall.pdf) (September 2002). 2001 residential, commercial, industrial, and transportation sector petroleum product prices are derived from: EIA, Form EIA-782A: "Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report." 2001 electric power prices based on: Federal Energy Regulatory Commission, FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants." 2001 ethanol prices derived from weekly spot prices in the Oxy Fuel News. 2001 world oil price: EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002). **Projections:** EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I14. Natural Gas Supply and Disposition**  
(Trillion Cubic Feet per Year)

Supply and Disposition	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Production</b>										
Dry Gas Production <sup>1</sup> . . . . .	19.45	21.53	20.45	20.80	24.85	22.03	23.02	26.36	21.78	21.87
Supplemental Natural Gas <sup>2</sup> . . . . .	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
<b>Net Imports</b> . . . . .	<b>3.73</b>	<b>4.76</b>	<b>5.14</b>	<b>5.10</b>	<b>6.88</b>	<b>7.26</b>	<b>7.82</b>	<b>7.90</b>	<b>7.10</b>	<b>7.42</b>
Canada . . . . .	3.61	4.16	3.79	3.76	5.14	3.31	3.74	5.21	3.02	3.21
Mexico . . . . .	-0.13	-0.20	0.01	0.01	-0.02	0.50	0.56	0.29	0.81	0.94
Liquefied Natural Gas . . . . .	0.26	0.80	1.34	1.33	1.76	3.44	3.53	2.40	3.26	3.26
<b>Total Supply</b> . . . . .	<b>23.26</b>	<b>26.39</b>	<b>25.69</b>	<b>26.00</b>	<b>31.83</b>	<b>29.39</b>	<b>30.94</b>	<b>34.36</b>	<b>28.98</b>	<b>29.38</b>
<b>Consumption by Sector</b>										
Residential . . . . .	4.81	5.48	5.39	5.39	5.93	5.85	5.62	6.21	5.92	5.73
Commercial . . . . .	3.24	3.64	3.57	3.57	4.12	4.03	3.98	4.38	4.13	4.47
Industrial <sup>3</sup> . . . . .	7.53	8.81	8.63	8.77	10.10	9.81	9.75	10.93	10.12	9.62
Electric Power <sup>4</sup> . . . . .	5.30	6.58	6.32	6.46	9.42	7.62	9.40	10.37	6.71	7.48
Transportation <sup>5</sup> . . . . .	0.01	0.06	0.06	0.06	0.10	0.10	0.09	0.11	0.11	0.10
Pipeline Fuel . . . . .	0.61	0.76	0.71	0.72	0.91	0.82	0.89	1.00	0.85	0.91
Lease and Plant Fuel <sup>6</sup> . . . . .	1.17	1.33	1.29	1.30	1.56	1.45	1.49	1.68	1.47	1.47
<b>Total</b> . . . . .	<b>22.67</b>	<b>26.66</b>	<b>25.97</b>	<b>26.28</b>	<b>32.14</b>	<b>29.68</b>	<b>31.22</b>	<b>34.67</b>	<b>29.31</b>	<b>29.78</b>
Natural Gas to Liquids . . . . .	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Discrepancy<sup>7</sup></b> . . . . .	<b>0.59</b>	<b>-0.28</b>	<b>-0.28</b>	<b>-0.28</b>	<b>-0.31</b>	<b>-0.30</b>	<b>-0.28</b>	<b>-0.31</b>	<b>-0.34</b>	<b>-0.39</b>

<sup>1</sup>Marketed production (wet) minus extraction losses.

<sup>2</sup>Synthetic natural gas, propane air, coke oven gas, refinery gas, biomass gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural gas.

<sup>3</sup>Includes consumption for combined heat and power, which produces electricity and other useful thermal energy.

<sup>4</sup>Includes consumption of energy by electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

<sup>5</sup>Compressed natural gas used as vehicle fuel.

<sup>6</sup>Represents natural gas used in the field gathering and processing plant machinery.

<sup>7</sup>Balancing item. Natural gas lost as a result of converting flow data measured at varying temperatures and pressures to a standard temperature and pressure and the merger of different data reporting systems which vary in scope, format, definition, and respondent type. In addition, 2001 values include net storage injections.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports.

Sources: 2001 supply values: Energy Information Administration (EIA), *Natural Gas Monthly*; DOE/EIA-0130(2002/08) (Washington, DC, August 2002). 2001 consumption based on: EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002). Projections: EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I15. Natural Gas Prices, Margins, and Revenue**  
(2001 Dollars per Thousand Cubic Feet, Unless Otherwise Noted)

Prices, Margins, and Revenue	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Source Price</b>										
Average Lower 48 Wellhead Price <sup>1</sup> . . . . .	4.12	3.39	3.81	3.86	3.70	4.03	4.88	3.95	5.55	5.70
Average Import Price . . . . .	4.43	3.40	3.95	3.99	3.88	4.41	5.24	4.19	5.74	5.91
<b>Average<sup>2</sup> . . . . .</b>	<b>4.17</b>	<b>3.39</b>	<b>3.84</b>	<b>3.89</b>	<b>3.74</b>	<b>4.13</b>	<b>4.97</b>	<b>4.01</b>	<b>5.59</b>	<b>5.75</b>
<b>Delivered Prices</b>										
Residential . . . . .	9.68	7.79	8.26	8.31	7.99	8.35	9.26	8.26	9.78	10.06
Commercial . . . . .	8.32	6.67	7.13	7.18	6.98	7.32	8.21	7.26	8.78	9.00
Industrial <sup>3</sup> . . . . .	5.01	4.11	4.56	4.60	4.51	4.85	5.73	4.76	6.36	6.56
Electric Power <sup>4</sup> . . . . .	4.87	3.95	4.40	4.49	4.44	4.71	5.73	4.73	6.16	6.36
Transportation <sup>5</sup> . . . . .	7.87	7.39	7.84	7.76	7.97	8.29	8.79	8.32	9.79	9.58
<b>Average<sup>6</sup> . . . . .</b>	<b>6.57</b>	<b>5.28</b>	<b>5.75</b>	<b>5.79</b>	<b>5.55</b>	<b>5.94</b>	<b>6.78</b>	<b>5.80</b>	<b>7.45</b>	<b>7.66</b>
<b>Transmission &amp; Distribution Margins<sup>7</sup></b>										
Residential . . . . .	5.50	4.39	4.42	4.42	4.25	4.23	4.29	4.25	4.19	4.31
Commercial . . . . .	4.14	3.28	3.29	3.29	3.24	3.19	3.23	3.25	3.19	3.25
Industrial <sup>3</sup> . . . . .	0.83	0.72	0.72	0.71	0.77	0.72	0.75	0.75	0.77	0.81
Electric Power <sup>4</sup> . . . . .	0.70	0.56	0.55	0.60	0.70	0.58	0.75	0.72	0.56	0.60
Transportation <sup>5</sup> . . . . .	3.69	4.00	4.00	3.87	4.23	4.16	3.81	4.31	4.19	3.83
<b>Average<sup>6</sup> . . . . .</b>	<b>2.40</b>	<b>1.89</b>	<b>1.91</b>	<b>1.90</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.79</b>	<b>1.86</b>	<b>1.90</b>
<b>Transmission &amp; Distribution Revenue (billion 2001 dollars)</b>										
Residential . . . . .	26.45	24.08	23.83	23.80	25.22	24.70	24.11	26.39	24.80	24.69
Commercial . . . . .	13.42	11.94	11.74	11.74	13.33	12.87	12.87	14.25	13.15	14.52
Industrial <sup>3</sup> . . . . .	6.28	6.36	6.19	6.20	7.82	7.08	7.36	8.23	7.79	7.80
Electric Power <sup>4</sup> . . . . .	3.69	3.70	3.50	3.90	6.57	4.41	7.08	7.42	3.78	4.51
Transportation <sup>5</sup> . . . . .	0.04	0.23	0.23	0.22	0.41	0.40	0.34	0.47	0.44	0.37
<b>Total . . . . .</b>	<b>49.88</b>	<b>46.31</b>	<b>45.49</b>	<b>45.86</b>	<b>53.36</b>	<b>49.46</b>	<b>51.75</b>	<b>56.76</b>	<b>49.96</b>	<b>51.89</b>
<b>Greenhouse Gas Allowance Cost</b>										
Residential . . . . .	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial . . . . .	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial <sup>3</sup> . . . . .	0.00	0.00	0.00	1.21	0.00	0.00	2.74	0.00	0.00	3.10
Electric Power <sup>4</sup> . . . . .	0.00	0.00	0.00	1.22	0.00	0.00	2.76	0.00	0.00	3.13
Transportation <sup>5</sup> . . . . .	0.00	0.00	0.00	1.23	0.00	0.00	2.79	0.00	0.00	3.16
<b>Average<sup>6</sup> . . . . .</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.77</b>	<b>0.00</b>	<b>0.00</b>	<b>1.84</b>	<b>0.00</b>	<b>0.00</b>	<b>1.96</b>
<b>Delivered Prices with Greenhouse Gas Allowance Cost</b>										
Residential . . . . .	9.68	7.79	8.26	8.31	7.99	8.35	9.26	8.26	9.78	10.06
Commercial . . . . .	8.32	6.67	7.13	7.18	6.98	7.32	8.21	7.26	8.78	9.00
Industrial <sup>3</sup> . . . . .	5.01	4.11	4.56	5.81	4.51	4.85	8.46	4.76	6.36	9.66
Electric Power <sup>4</sup> . . . . .	4.87	3.95	4.40	5.72	4.44	4.71	8.49	4.73	6.16	9.49
Transportation <sup>5</sup> . . . . .	7.87	7.39	7.84	8.99	7.97	8.29	11.58	8.32	9.79	12.74
<b>Average<sup>6</sup> . . . . .</b>	<b>6.57</b>	<b>5.28</b>	<b>5.75</b>	<b>6.56</b>	<b>5.55</b>	<b>5.94</b>	<b>8.62</b>	<b>5.80</b>	<b>7.45</b>	<b>9.62</b>

<sup>1</sup>Represents lower 48 onshore and offshore supplies.

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

<sup>3</sup>Includes consumption for combined heat and power, which produces electricity and other useful thermal energy.

<sup>4</sup>Includes consumption of energy by electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

<sup>5</sup>Compressed natural gas used as a vehicle fuel. Price includes estimated motor vehicle fuel taxes.

<sup>6</sup>Weighted average allowance cost. Weights used are the sectoral consumption values excluding lease, plant, and pipeline fuel.

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

**Note:** Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports.

**Sources:** 2001 electric generators delivered price: Federal Energy Regulatory Commission, FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants." 2001 industrial delivered prices based on Energy Information Administration (EIA), *Manufacturing Energy Consumption Survey 1998*. 2001 residential, commercial, and transportation delivered prices, average lower 48 wellhead price, and average import price: EIA, *Natural Gas Monthly*, DOE/EIA-0130(2002/08) (Washington, DC, August 2002). Other 2001 values: EIA, Office of Integrated Analysis and Forecasting. **Projections:** EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.



**Table I16. Oil and Gas Supply**

Production and Supply	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Crude Oil</b>										
<b>Lower 48 Average Wellhead Price<sup>1</sup></b> (2001 dollars per barrel) .....	<b>22.91</b>	<b>23.89</b>	<b>23.82</b>	<b>23.50</b>	<b>24.98</b>	<b>24.93</b>	<b>23.62</b>	<b>26.22</b>	<b>26.04</b>	<b>24.07</b>
<b>Production (million barrels per day)<sup>2</sup></b>										
<b>U.S. Total</b> .....	<b>5.80</b>	<b>5.64</b>	<b>5.33</b>	<b>5.30</b>	<b>5.43</b>	<b>5.03</b>	<b>4.99</b>	<b>5.30</b>	<b>4.70</b>	<b>4.67</b>
Lower 48 Onshore .....	3.13	2.47	2.48	2.48	2.06	2.03	2.01	1.92	1.87	1.85
Lower 48 Offshore .....	1.71	2.52	2.23	2.23	2.14	1.81	1.78	2.22	1.71	1.69
Alaska .....	0.97	0.64	0.61	0.60	1.23	1.19	1.19	1.17	1.13	1.13
<b>Lower 48 End of Year Reserves (billion barrels)<sup>2</sup></b> .	<b>19.48</b>	<b>17.72</b>	<b>17.22</b>	<b>17.18</b>	<b>15.39</b>	<b>14.91</b>	<b>14.81</b>	<b>15.04</b>	<b>13.91</b>	<b>13.79</b>
<b>Natural Gas</b>										
<b>Lower 48 Average Wellhead Price<sup>1</sup></b> (2001 dollars per thousand cubic feet) .....	<b>4.12</b>	<b>3.39</b>	<b>3.81</b>	<b>3.86</b>	<b>3.70</b>	<b>4.03</b>	<b>4.88</b>	<b>3.95</b>	<b>5.55</b>	<b>5.70</b>
<b>Dry Production (trillion cubic feet)<sup>3</sup></b>										
<b>U.S. Total</b> .....	<b>19.45</b>	<b>21.54</b>	<b>20.46</b>	<b>20.80</b>	<b>24.86</b>	<b>22.03</b>	<b>23.02</b>	<b>26.37</b>	<b>21.79</b>	<b>21.87</b>
Lower 48 Onshore .....	13.72	15.57	15.04	15.22	17.96	15.18	16.14	17.77	15.64	15.85
Associated-Dissolved <sup>4</sup> .....	1.77	1.37	1.37	1.37	1.19	1.18	1.17	1.13	1.11	1.10
Non-Associated .....	11.94	14.20	13.67	13.85	16.77	14.00	14.96	16.64	14.54	14.75
Conventional .....	6.54	7.04	7.28	7.37	7.15	7.20	7.56	7.04	7.40	7.12
Unconventional .....	5.40	7.16	6.39	6.48	9.61	6.80	7.40	9.60	7.14	7.63
Lower 48 Offshore .....	5.30	5.49	4.94	5.10	5.43	4.46	4.50	5.74	3.29	3.18
Associated-Dissolved <sup>4</sup> .....	1.08	0.96	0.85	0.85	0.80	0.67	0.66	0.82	0.63	0.63
Non-Associated .....	4.22	4.53	4.09	4.25	4.63	3.79	3.84	4.93	2.66	2.55
Alaska .....	0.43	0.48	0.48	0.48	1.47	2.39	2.39	2.85	2.85	2.84
<b>Lower 48 End of Year Dry Reserves<sup>3</sup></b> (trillion cubic feet) .....	<b>174.04</b>	<b>186.42</b>	<b>169.20</b>	<b>169.24</b>	<b>194.24</b>	<b>159.17</b>	<b>158.08</b>	<b>190.10</b>	<b>144.26</b>	<b>144.81</b>
<b>Supplemental Gas Supplies (trillion cubic feet)<sup>5</sup></b> ..	<b>0.08</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>
<b>Total Lower 48 Wells (thousands)</b> .....	<b>33.94</b>	<b>25.73</b>	<b>24.64</b>	<b>24.67</b>	<b>26.21</b>	<b>23.63</b>	<b>25.31</b>	<b>27.53</b>	<b>24.91</b>	<b>25.49</b>

<sup>1</sup>Represents lower 48 onshore and offshore supplies.

<sup>2</sup>Includes lease condensate.

<sup>3</sup>Marketed production (wet) minus extraction losses.

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

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

Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports.

Sources: 2001 lower 48 onshore, lower 48 offshore, and Alaska crude oil production: Energy Information Administration (EIA), *Petroleum Supply Annual 2001*, DOE/EIA-0340(2001)/1 (Washington, DC, June 2002). 2001 natural gas lower 48 average wellhead price, Alaska and total natural gas production, and supplemental gas supplies: EIA, *Natural Gas Monthly*, DOE/EIA-0130(2002/08) (Washington, DC, August 2002). Other 2001 values: EIA, Office of Integrated Analysis and Forecasting. Projections: EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I17. Coal Supply, Disposition, and Prices**  
(Million Short Tons per Year, Unless Otherwise Noted)

Supply, Disposition, and Prices	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Production<sup>1</sup></b>										
Appalachia .....	443	420	419	423	416	443	281	433	473	251
Interior .....	147	161	159	158	151	158	123	159	170	84
West .....	548	669	676	532	801	871	235	865	964	213
East of the Mississippi .....	539	527	528	531	529	564	383	554	605	319
West of the Mississippi .....	599	723	726	583	839	907	257	902	1002	228
<b>Total .....</b>	<b>1138</b>	<b>1250</b>	<b>1254</b>	<b>1114</b>	<b>1367</b>	<b>1471</b>	<b>639</b>	<b>1456</b>	<b>1607</b>	<b>547</b>
<b>Net Imports</b>										
Imports .....	19	20	20	11	25	25	11	28	28	10
Exports .....	49	33	34	33	29	29	26	24	24	24
<b>Total .....</b>	<b>-30</b>	<b>-14</b>	<b>-14</b>	<b>-22</b>	<b>-4</b>	<b>-4</b>	<b>-15</b>	<b>3</b>	<b>4</b>	<b>-14</b>
<b>Total Supply<sup>2</sup> .....</b>	<b>1109</b>	<b>1236</b>	<b>1240</b>	<b>1092</b>	<b>1363</b>	<b>1467</b>	<b>624</b>	<b>1460</b>	<b>1611</b>	<b>534</b>
<b>Consumption by Sector</b>										
Residential and Commercial .....	4	5	5	5	5	5	5	5	5	5
Industrial <sup>3</sup> .....	63	67	68	62	70	70	60	71	74	60
of which: Coal to Liquids .....	0	0	0	0	0	0	0	0	0	0
Coke Plants .....	26	24	24	24	20	20	17	18	18	14
Electric Power <sup>4</sup> .....	957	1146	1149	998	1274	1378	550	1371	1519	463
<b>Total .....</b>	<b>1050</b>	<b>1242</b>	<b>1245</b>	<b>1088</b>	<b>1369</b>	<b>1473</b>	<b>632</b>	<b>1466</b>	<b>1616</b>	<b>543</b>
<b>Discrepancy and Stock Change<sup>5</sup> .....</b>	<b>58</b>	<b>-6</b>	<b>-5</b>	<b>4</b>	<b>-6</b>	<b>-6</b>	<b>-8</b>	<b>-6</b>	<b>-6</b>	<b>-9</b>
<b>Average Minemouth Price</b>										
(2001 dollars per short ton) .....	17.59	15.06	15.08	15.91	14.34	14.84	16.51	14.39	15.19	15.80
(2001 dollars per million Btu) .....	0.83	0.73	0.73	0.76	0.70	0.73	0.76	0.71	0.74	0.73
<b>Delivered Prices (2001 dollars per short ton)<sup>6</sup></b>										
Industrial .....	32.82	30.11	30.16	30.25	28.45	29.02	26.46	28.04	28.58	25.30
Coke Plants .....	46.42	41.27	41.32	41.23	38.08	38.10	38.36	36.67	36.59	36.70
Electric Power										
(2001 dollars per short ton) .....	25.06	23.63	23.67	23.94	22.44	22.93	22.42	22.27	23.03	21.42
(2001 dollars per million Btu) .....	1.25	1.17	1.17	1.17	1.12	1.14	1.05	1.11	1.14	1.01
<b>Average .....</b>	<b>26.06</b>	<b>24.33</b>	<b>24.37</b>	<b>24.68</b>	<b>22.98</b>	<b>23.43</b>	<b>23.24</b>	<b>22.74</b>	<b>23.44</b>	<b>22.26</b>
Exports <sup>7</sup> .....	36.97	32.68	32.79	32.43	30.94	31.24	30.24	30.36	30.38	28.86
<b>Greenhouse Gas Allowance Cost (2001 dollars per short ton)<sup>6</sup></b>										
Industrial .....	0.00	0.00	0.00	46.04	0.00	0.00	103.96	0.00	0.00	117.57
Coke Plants .....	0.00	0.00	0.00	57.82	0.00	0.00	130.73	0.00	0.00	148.24
Electric Power										
(2001 dollars per short ton) .....	0.00	0.00	0.00	43.64	0.00	0.00	102.27	0.00	0.00	115.52
(2001 dollars per million Btu) .....	0.00	0.00	0.00	2.13	0.00	0.00	4.79	0.00	0.00	5.44
<b>Average .....</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>44.09</b>	<b>0.00</b>	<b>0.00</b>	<b>103.20</b>	<b>0.00</b>	<b>0.00</b>	<b>116.63</b>
<b>Delivered Prices with Greenhouse Gas Allowance Cost (2001 dollars per short ton)<sup>6</sup></b>										
Industrial .....	32.82	30.11	30.16	76.30	28.45	29.02	130.42	28.04	28.58	142.86
Coke Plants .....	46.42	41.27	41.32	99.05	38.08	38.10	169.09	36.67	36.59	184.95
Electric Power										
(2001 dollars per short ton) .....	25.06	23.63	23.67	67.58	22.44	22.93	124.68	22.27	23.03	136.95
(2001 dollars per million Btu) .....	1.25	1.17	1.17	3.30	1.12	1.14	5.84	1.11	1.14	6.45
<b>Average .....</b>	<b>26.06</b>	<b>24.33</b>	<b>24.37</b>	<b>68.77</b>	<b>22.98</b>	<b>23.43</b>	<b>126.44</b>	<b>22.74</b>	<b>23.44</b>	<b>138.89</b>

<sup>1</sup>Includes anthracite, bituminous coal, lignite, and waste coal delivered to independent power producers. Waste coal deliveries totaled 10.1 million tons in 2000 and 10.6 million tons in 2001.

<sup>2</sup>Production plus net imports and net storage withdrawals.

<sup>3</sup>Includes consumption for combined heat and power plants, except those plants whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>4</sup>Includes all electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public.

<sup>5</sup>Balancing item: the sum of production, net imports, and net storage withdrawals minus total consumption.

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

<sup>7</sup>F.a.s. price at U.S. port of exit.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports.

Sources: 2001 data based on Energy Information Administration (EIA), *Quarterly Coal Report, October-December 2001*, DOE/EIA-0121(2001/4Q) (Washington, DC, May 2002) and EIA, AEO2003 National Energy Modeling System run MLBILL.D050503A. Projections: EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I18. Renewable Energy Generating Capacity and Generation**  
(Gigawatts, Unless Otherwise Noted)

Capacity and Generation	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Electric Power Sector<sup>1</sup></b>										
<b>Net Summer Capacity</b>										
Conventional Hydropower	78.10	78.66	78.66	78.66	78.65	78.65	78.65	78.65	78.65	78.65
Geothermal <sup>2</sup>	2.83	3.81	3.87	6.81	5.19	5.32	10.43	5.77	5.77	11.20
Municipal Solid Waste <sup>3</sup>	3.25	4.08	4.12	4.83	4.41	4.46	5.17	4.42	4.46	5.19
Wood and Other Biomass <sup>4</sup>	1.80	2.09	2.09	3.45	2.20	2.31	60.49	2.33	2.74	87.36
Solar Thermal	0.33	0.44	0.44	0.44	0.48	0.48	0.48	0.50	0.50	0.50
Solar Photovoltaic <sup>5</sup>	0.02	0.10	0.10	0.10	0.27	0.27	0.27	0.36	0.36	0.36
Wind	4.29	8.24	8.26	42.86	10.05	10.73	90.78	10.81	11.88	92.04
<b>Total</b>	<b>90.62</b>	<b>97.42</b>	<b>97.54</b>	<b>137.15</b>	<b>101.24</b>	<b>102.21</b>	<b>246.27</b>	<b>102.83</b>	<b>104.36</b>	<b>275.30</b>
<b>Generation (billion kilowatthours)</b>										
Conventional Hydropower	213.82	300.90	300.90	300.88	300.07	300.06	299.89	300.36	300.35	300.07
Geothermal <sup>2</sup>	13.81	22.04	22.47	45.66	33.43	34.49	76.24	38.12	38.05	82.78
Municipal Solid Waste <sup>3</sup>	19.55	29.20	29.55	35.17	31.67	32.01	37.63	31.81	32.17	37.81
Wood and Other Biomass <sup>4</sup>	9.38	21.47	21.68	23.50	22.06	22.64	364.99	22.82	24.28	573.27
Dedicated Plants	7.66	12.47	12.47	17.53	13.22	13.92	364.99	14.09	16.22	573.27
Cofiring	1.72	9.00	9.20	5.97	8.84	8.72	0.00	8.73	8.06	0.00
Solar Thermal	0.49	0.77	0.77	0.77	0.90	0.90	0.90	0.97	0.97	0.97
Solar Photovoltaic <sup>5</sup>	0.00	0.24	0.24	0.24	0.66	0.66	0.66	0.88	0.88	0.88
Wind	5.78	22.91	22.98	139.07	29.20	31.63	304.22	32.03	35.91	309.07
<b>Total</b>	<b>262.85</b>	<b>397.53</b>	<b>398.59</b>	<b>545.28</b>	<b>417.98</b>	<b>422.40</b>	<b>1084.53</b>	<b>427.00</b>	<b>432.62</b>	<b>1304.85</b>
<b>End-Use Sector</b>										
<b>Net Summer Capacity</b>										
<b>Combined Heat and Power<sup>6</sup></b>										
Municipal Solid Waste	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Biomass	4.41	5.93	5.90	5.87	7.79	7.80	7.66	8.74	8.68	8.57
<b>Total</b>	<b>4.69</b>	<b>6.21</b>	<b>6.19</b>	<b>6.15</b>	<b>8.07</b>	<b>8.08</b>	<b>7.94</b>	<b>9.03</b>	<b>8.96</b>	<b>8.85</b>
<b>Other End-Use Generators<sup>7</sup></b>										
Conventional Hydropower <sup>8</sup>	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar Photovoltaic	0.02	0.38	0.38	0.38	0.61	0.62	0.77	0.94	0.97	1.19
<b>Total</b>	<b>1.12</b>	<b>1.47</b>	<b>1.47</b>	<b>1.47</b>	<b>1.71</b>	<b>1.72</b>	<b>1.87</b>	<b>2.04</b>	<b>2.06</b>	<b>2.29</b>
<b>Generation (billion kilowatthours)</b>										
<b>Combined Heat and Power<sup>6</sup></b>										
Municipal Solid Waste	2.46	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Biomass	28.67	37.53	37.39	37.19	48.39	48.45	47.63	53.98	53.61	52.94
<b>Total</b>	<b>31.13</b>	<b>39.68</b>	<b>39.54</b>	<b>39.34</b>	<b>50.54</b>	<b>50.60</b>	<b>49.78</b>	<b>56.13</b>	<b>55.76</b>	<b>55.09</b>
<b>Other End-Use Generators<sup>7</sup></b>										
Conventional Hydropower <sup>8</sup>	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar Photovoltaic	0.02	0.82	0.82	0.82	1.32	1.34	1.65	1.99	2.04	2.51
<b>Total</b>	<b>4.25</b>	<b>5.05</b>	<b>5.05</b>	<b>5.05</b>	<b>5.55</b>	<b>5.57</b>	<b>5.88</b>	<b>6.23</b>	<b>6.28</b>	<b>6.74</b>

<sup>1</sup>Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public.

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

<sup>3</sup>Includes landfill gas.

<sup>4</sup>Includes projections for energy crops after 2010.

<sup>5</sup>Does not include off-grid photovoltaics (PV). See Annual Energy Review 2001 Table 10.6 for estimates of 1989-2000 PV shipments, including exports, for both grid-connected and off-grid applications.

<sup>6</sup>Includes combined heat and power plants and electricity-only plants in the commercial and industrial sectors.

<sup>7</sup>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.

<sup>8</sup>Represents own-use industrial hydroelectric power.

Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports. Net summer capacity has been estimated for nonutility generators for AEO2003. Net summer capacity 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: 2001 capacity: Energy Information Administration (EIA), Form EIA-860: "Annual Electric Generator Report" (preliminary). 2001 generation: EIA, *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002). Projections: EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I19. Renewable Energy Consumption by Sector and Source<sup>1</sup>**  
(Quadrillion Btu per Year)

Sector and Source	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Marketed Renewable Energy<sup>2</sup></b>										
<b>Residential</b> .....	<b>0.39</b>	<b>0.41</b>	<b>0.41</b>	<b>0.41</b>	<b>0.41</b>	<b>0.40</b>	<b>0.40</b>	<b>0.40</b>	<b>0.40</b>	<b>0.40</b>
Wood .....	0.39	0.41	0.41	0.41	0.41	0.40	0.40	0.40	0.40	0.40
<b>Commercial</b> .....	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>
Biomass .....	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
<b>Industrial<sup>3</sup></b> .....	<b>1.82</b>	<b>2.22</b>	<b>2.21</b>	<b>2.20</b>	<b>2.77</b>	<b>2.77</b>	<b>2.74</b>	<b>3.05</b>	<b>3.03</b>	<b>3.01</b>
Conventional Hydroelectric .....	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Municipal Solid Waste .....	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Biomass .....	1.77	2.17	2.17	2.15	2.72	2.72	2.69	3.00	2.98	2.96
<b>Transportation</b> .....	<b>0.15</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.31</b>	<b>0.31</b>	<b>0.28</b>	<b>0.33</b>	<b>0.33</b>	<b>0.29</b>
Ethanol used in E85 <sup>4</sup> .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Ethanol used in Gasoline Blending .....	0.15	0.26	0.26	0.25	0.30	0.30	0.28	0.33	0.32	0.28
<b>Electric Power<sup>5</sup></b> .....	<b>3.01</b>	<b>4.57</b>	<b>4.59</b>	<b>6.62</b>	<b>5.02</b>	<b>5.09</b>	<b>12.35</b>	<b>5.21</b>	<b>5.27</b>	<b>14.49</b>
Conventional Hydroelectric .....	2.16	3.09	3.09	3.09	3.07	3.07	3.07	3.07	3.07	3.07
Geothermal .....	0.29	0.57	0.58	1.34	0.93	0.96	2.31	1.07	1.07	2.54
Municipal Solid Waste <sup>6</sup> .....	0.31	0.40	0.40	0.48	0.43	0.44	0.51	0.43	0.44	0.51
Biomass .....	0.15	0.26	0.27	0.28	0.27	0.28	3.32	0.28	0.29	5.17
Dedicated Plants .....	0.12	0.14	0.14	0.20	0.15	0.16	3.32	0.16	0.19	5.17
Cofiring .....	0.03	0.12	0.13	0.08	0.12	0.12	0.00	0.12	0.11	0.00
Solar Thermal .....	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02
Solar Photovoltaic .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wind .....	0.08	0.24	0.24	1.43	0.30	0.32	3.13	0.33	0.37	3.18
<b>Total Marketed Renewable Energy</b> .....	<b>5.46</b>	<b>7.56</b>	<b>7.57</b>	<b>9.59</b>	<b>8.61</b>	<b>8.68</b>	<b>15.87</b>	<b>9.10</b>	<b>9.13</b>	<b>18.29</b>
<b>Sources of Ethanol</b>										
From Corn .....	0.15	0.26	0.26	0.25	0.28	0.28	0.26	0.28	0.28	0.24
From Cellulose .....	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.05	0.05	0.05
<b>Total</b> .....	<b>0.15</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.31</b>	<b>0.31</b>	<b>0.28</b>	<b>0.33</b>	<b>0.33</b>	<b>0.29</b>
<b>Non-Marketed Renewable Energy<sup>7</sup></b>										
<b>Selected Consumption</b>										
<b>Residential</b> .....	<b>0.03</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>
Solar Hot Water Heating .....	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04
Geothermal Heat Pumps .....	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Solar Photovoltaic .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Commercial</b> .....	<b>0.02</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
Solar Thermal .....	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Solar Photovoltaic .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01

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

<sup>2</sup>Includes nonelectric renewable energy groups for which the energy source is bought and sold in the marketplace, although all transactions may not necessarily be marketed, and marketed renewable energy inputs for electricity entering the marketplace on the electric power grid. Excludes electricity imports; see Table I8.

<sup>3</sup>Includes all electricity production by industrial and other combined heat and power for the grid and for own use.

<sup>4</sup>Excludes motor gasoline component of E85.

<sup>5</sup>Includes consumption of energy by electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

<sup>6</sup>Includes landfill gas.

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

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports.

Sources: 2001 ethanol: Energy Information Administration (EIA), *Annual Energy Review 2001*, DOE/EIA-0384(2001) (Washington, DC, November 2002). 2001 electric generators: EIA, Form EIA-860: "Annual Electric Generator Report" (preliminary). Other 2001 values: EIA, Office of Integrated Analysis and Forecasting. Projections: EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I20. Greenhouse Gas Emissions and Allowance Cost**  
(Million Metric Tons Carbon Equivalent)

Sector and Source	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Carbon Dioxide Emissions</b>										
<b>Residential</b>										
Petroleum .....	27.2	27.6	27.6	27.6	25.7	25.7	25.8	25.0	25.0	25.1
Natural Gas .....	71.1	81.1	79.9	79.7	87.9	86.5	83.2	91.9	87.7	84.8
Coal .....	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3
<b>Total .....</b>	<b>98.7</b>	<b>109.1</b>	<b>107.8</b>	<b>107.7</b>	<b>113.9</b>	<b>112.6</b>	<b>109.3</b>	<b>117.2</b>	<b>113.1</b>	<b>110.3</b>
<b>Commercial</b>										
Petroleum .....	14.0	13.7	13.9	13.9	14.1	14.7	15.3	14.1	14.9	16.3
Natural Gas .....	48.0	53.9	52.9	52.9	60.9	59.7	58.9	64.8	61.1	66.2
Coal .....	2.3	2.4	2.4	2.4	2.7	2.7	2.7	2.8	2.8	2.8
<b>Total .....</b>	<b>64.3</b>	<b>70.0</b>	<b>69.2</b>	<b>69.2</b>	<b>77.7</b>	<b>77.0</b>	<b>76.9</b>	<b>81.7</b>	<b>78.8</b>	<b>85.3</b>
<b>Industrial<sup>1</sup></b>										
Petroleum .....	97.9	97.9	98.5	96.0	105.5	106.8	99.4	109.1	113.0	109.2
Natural Gas <sup>2</sup> .....	123.4	147.7	144.2	146.6	169.4	163.8	163.8	183.3	168.4	161.3
Coal .....	52.1	56.5	56.6	53.1	56.2	56.5	49.2	56.2	57.2	48.1
<b>Total .....</b>	<b>273.4</b>	<b>302.1</b>	<b>299.4</b>	<b>295.7</b>	<b>331.2</b>	<b>327.1</b>	<b>312.4</b>	<b>348.6</b>	<b>338.6</b>	<b>318.6</b>
<b>Transportation</b>										
Petroleum <sup>3</sup> .....	501.4	611.5	610.3	603.5	737.5	737.8	686.3	802.8	800.5	721.1
Natural Gas <sup>4</sup> .....	9.2	12.0	11.3	11.5	14.9	13.5	14.5	16.4	14.2	14.8
Other <sup>5</sup> .....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total .....</b>	<b>510.6</b>	<b>623.6</b>	<b>621.6</b>	<b>615.1</b>	<b>752.5</b>	<b>751.3</b>	<b>700.8</b>	<b>819.2</b>	<b>814.7</b>	<b>735.9</b>
<b>Total Carbon Dioxide Emissions by Delivered Fuel</b>										
Petroleum <sup>3</sup> .....	640.5	750.8	750.3	741.0	882.8	885.0	826.7	950.9	953.5	871.7
Natural Gas .....	251.7	294.7	288.3	290.7	333.1	323.5	320.3	356.4	331.3	327.1
Coal .....	54.7	59.3	59.4	55.9	59.3	59.6	52.3	59.4	60.3	51.3
Other <sup>5</sup> .....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total .....</b>	<b>947.0</b>	<b>1104.8</b>	<b>1098.1</b>	<b>1087.7</b>	<b>1275.2</b>	<b>1268.0</b>	<b>1199.3</b>	<b>1366.7</b>	<b>1345.2</b>	<b>1250.1</b>
<b>Electric Power<sup>6</sup></b>										
Petroleum .....	27.5	10.1	12.6	6.2	11.3	12.2	5.4	12.0	30.5	7.4
Natural Gas .....	77.7	96.6	92.7	94.1	138.2	111.9	113.5	152.1	98.7	75.7
Coal .....	506.4	590.8	592.9	521.1	653.0	709.4	258.6	703.6	785.2	140.9
<b>Total .....</b>	<b>611.6</b>	<b>697.4</b>	<b>698.1</b>	<b>621.4</b>	<b>802.5</b>	<b>833.5</b>	<b>377.5</b>	<b>867.8</b>	<b>914.4</b>	<b>224.1</b>
<b>Total Carbon Dioxide Emissions by Primary Fuel<sup>7</sup></b>										
Petroleum <sup>3</sup> .....	668.0	760.8	762.9	747.2	894.1	897.2	832.1	962.9	984.0	879.1
Natural Gas .....	329.4	391.3	381.0	384.8	471.3	435.4	433.9	508.5	430.0	402.9
Coal .....	561.1	650.1	652.3	577.0	712.2	769.0	310.9	763.0	845.5	192.2
Other <sup>5</sup> .....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total .....</b>	<b>1558.6</b>	<b>1802.2</b>	<b>1796.2</b>	<b>1709.0</b>	<b>2077.7</b>	<b>2101.6</b>	<b>1576.8</b>	<b>2234.4</b>	<b>2259.6</b>	<b>1474.2</b>
<b>Non-Energy Related Carbon Dioxide Emissions</b>										
.....	36.3	39.5	39.5	39.5	43.9	43.9	43.9	46.2	46.2	46.2
<b>Total Carbon Dioxide Emissions .....</b>	<b>1594.9</b>	<b>1841.7</b>	<b>1835.7</b>	<b>1748.6</b>	<b>2121.6</b>	<b>2145.5</b>	<b>1620.7</b>	<b>2280.6</b>	<b>2305.8</b>	<b>1520.4</b>
<b>Other Greenhouse Gas Emissions</b>										
Methane .....	175.2	177.6	177.6	115.2	174.3	174.3	126.4	172.2	172.2	120.0
Nitrous Oxide .....	118.9	126.5	126.5	121.0	137.3	137.3	131.4	143.4	143.4	137.2
High Global Warming Potential Gases .....	38.8	84.2	84.2	50.2	155.0	155.0	81.7	209.4	209.4	105.8
<b>Total Greenhouse Gas Emissions .....</b>	<b>1927.8</b>	<b>2230.1</b>	<b>2224.1</b>	<b>2035.0</b>	<b>2588.2</b>	<b>2612.1</b>	<b>1960.2</b>	<b>2805.6</b>	<b>2830.8</b>	<b>1883.3</b>

**Table I20. Greenhouse Gas Emissions and Allowance Cost (Continued)**  
(Million Metric Tons Carbon Equivalent)

Sector and Source	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>Greenhouse Gas Emission Cap Compliance</b>										
Covered Emissions										
Energy-Related Carbon Dioxide .....	1378.2	1605.0	1601.0	1514.0	1866.0	1891.7	1370.5	2014.2	2046.3	1257.3
Other Greenhouse Gases .....	75.2	123.5	123.5	70.1	195.7	195.7	102.7	250.7	250.7	127.6
Offsets Purchased .....	0.0	0.0	0.0	234.3	0.0	0.0	125.8	0.0	0.0	125.6
Non-Covered Greenhouse Gas Offsets .....	0.0	0.0	0.0	48.5	0.0	0.0	34.2	0.0	0.0	39.0
U.S. Sequestration Offsets .....	0.0	0.0	0.0	112.7	0.0	0.0	91.6	0.0	0.0	86.5
International Offsets .....	0.0	0.0	0.0	73.1	0.0	0.0	0.0	0.0	0.0	0.1
Covered Emissions less Offsets .....	1453.4	1728.5	1724.6	1349.8	2061.6	2087.4	1347.4	2264.9	2297.0	1259.3
Covered Emissions Coal .....	N/A	N/A	N/A	1465.1	N/A	N/A	1257.9	N/A	N/A	1257.9
Allowance Bank Activity .....	0.0	0.0	0.0	115.2	0.0	0.0	-89.5	0.0	0.0	-1.4
Cumulative Bank Balance .....	0.0	0.0	0.0	115.2	0.0	0.0	4.9	0.0	0.0	-86.2
<b>Allowance Cost (2001 dollars per ton)</b>										
Emissions Allowance Cost .....	0.00	0.00	0.00	83.33	0.00	0.00	188.40	0.00	0.00	213.65
Offset Price .....	0.00	0.00	0.00	71.28	0.00	0.00	34.59	0.00	0.00	51.74

<sup>1</sup>Fuel consumption includes energy for combined heat and power plants, except those plants whose primary business is to sell electricity, or electricity and heat, to the public.  
<sup>2</sup>Includes lease and plant fuel.  
<sup>3</sup>This includes international bunker fuel, which by convention are excluded from the international accounting of carbon dioxide emissions. In the years from 1990 through 2000, international bunker fuels accounted for 24 to 30 million metric tons carbon equivalent of carbon dioxide annually.  
<sup>4</sup>Includes pipeline fuel natural gas and compressed natural gas used as vehicle fuel.  
<sup>5</sup>Includes methanol and liquid hydrogen.  
<sup>6</sup>Includes electricity-only and combined heat and power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public. Does not include emissions from the nonbiogenic component of municipal solid waste because under international guidelines these are accounted for as waste, not energy.  
<sup>7</sup>Emissions from electric power generators are distributed to the primary fuels.  
N/A = Not applicable.  
Note: Totals may not equal sum of components due to independent rounding. Data for 2001 are model results and may differ slightly from official EIA data reports.  
**Sources:** 2001 emissions and emission factors: Energy Information Administration (EIA), *Emissions of Greenhouse Gases in the United States 2001*, DOE/EIA-0573(2001) (Washington, DC, December 2002). **Projections:** EIA, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.

**Table I21. Macroeconomic Indicators**  
(Billion 1996 Chain-Weighted Dollars, Unless Otherwise Noted)

Indicators	2001	Projections								
		2010			2020			2025		
		Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price	Reference	High Natural Gas Price	S. 139 with High Natural Gas Price
<b>GDP Chain-Type Price Index (1996=1.000)</b>										
GDP Chain-Type Price Index (1996=1.000)	1.094	1.313	1.313	1.322	1.708	1.698	1.731	1.981	1.976	2.024
Potential Gross Domestic Product	9456	12454	12443	12448	16772	16766	16721	19240	19225	19147
Real Gross Domestic Product	9215	12258	12230	12187	16444	16465	16354	18916	18854	18787
Real Consumption	6377	8412	8394	8359	11346	11356	11268	13008	12954	12919
Real Investment	1575	2499	2490	2471	3755	3760	3721	4496	4468	4444
Real Government Spending	1640	1895	1894	1896	2211	2211	2203	2429	2426	2416
Real Exports	1076	1784	1784	1781	3361	3372	3334	4696	4706	4624
Real Imports	1492	2302	2302	2291	4060	4056	4014	5395	5373	5350
Real Disposable Personal Income	6748	8635	8608	8583	11693	11694	11626	13425	13360	13379
Federal Funds Rate (percent)	3.89	5.48	5.38	5.55	6.37	6.36	6.54	6.49	6.26	6.74
<b>AA Utility Bond Rate (percent)</b>										
Nominal	7.57	7.22	7.17	7.34	9.00	8.96	9.14	9.61	9.51	9.83
Real	5.60	5.26	5.23	5.18	6.12	6.12	6.14	6.54	6.36	6.66
<b>Energy Intensity (thousand Btu per 1996 dollar of GDP)</b>										
Delivered Energy	7.74	6.83	6.80	6.77	5.91	5.87	5.58	5.52	5.44	5.07
Total Energy	10.56	9.24	9.21	9.15	7.89	7.88	7.37	7.33	7.30	6.70
Consumer Price Index (1982-84=1.00)	1.77	2.19	2.19	2.20	2.93	2.91	2.97	3.47	3.46	3.55
Unemployment Rate (percent)	4.79	4.42	4.50	4.62	5.88	5.79	6.02	5.77	5.89	5.93
<b>Housing Starts (millions)</b>										
Single-Family	1.27	1.34	1.34	1.31	1.12	1.12	1.11	1.12	1.12	1.11
Multifamily	0.33	0.47	0.47	0.45	0.49	0.49	0.48	0.57	0.56	0.57
Mobile Home Shipments	0.19	0.37	0.37	0.37	0.32	0.33	0.33	0.33	0.33	0.33
Commercial Floorspace, Total (billion square feet)	70.2	82.0	81.9	81.9	94.6	94.5	94.1	100.8	100.7	100.3
<b>Value of Shipments (billion 1996 dollars)</b>										
Total Industrial	5425	6977	6951	6897	8969	8981	8858	10128	10075	9970
Nonmanufacturing	1346	1510	1502	1491	1744	1742	1703	1870	1850	1810
Manufacturing	4079	5466	5450	5406	7226	7239	7155	8258	8226	8160
Energy-Intensive Manufacturing	1086	1264	1259	1251	1451	1450	1427	1538	1524	1505
Non-Energy-Intensive Manufacturing	2993	4203	4190	4155	5774	5790	5728	6720	6702	6655
United Sales of Light-Duty Vehicles	17.11	18.29	18.22	17.85	20.02	20.16	20.10	20.00	19.87	20.27
<b>Population (millions)</b>										
Population with Armed Forces Overseas	278.2	300.2	300.2	300.2	325.3	325.3	325.3	338.2	338.2	338.2
Population (aged 16 and over)	215.4	236.6	236.6	236.6	256.5	256.5	256.5	266.6	266.6	266.6
Employment, Non-Agriculture	131.7	147.3	147.0	146.8	159.1	159.3	158.7	165.8	165.4	165.3
Employment, Manufacturing	17.5	17.7	17.7	17.6	17.8	17.9	17.8	18.5	18.5	18.4
Labor Force	141.8	156.5	156.5	156.4	169.8	169.8	169.6	177.4	177.4	177.2

GDP = Gross domestic product.

Btu = British thermal unit.

Sources: 2001: Global Insight macroeconomic model CTL0802. Projections: Energy Information Administration, AEO2003 National Energy Modeling System runs MLBASE.D050303A, MLBASE\_HGP.D052103A, and MLBILL\_HGP.D052303A.