Release Date: July 2008 Next Release Date: July 2009

Table 1.2. Renewable Energy Consumption by Energy Use Sector and Energy Source, 2002-2006 (Quadrillion Btu)

| Sector and Source  | 2002                    | 2003           | 2004           | 2005           | 2006           |
|--|-------------------------|----------------|----------------|----------------|----------------|
|  |                         |                |                |                |                |
| Γotal  | 5.893                   | 6.150          | 6.261          | 6.444          | 6.922          |
| Biomass  | 2.706                   | 2.817          | 3.023          | 3.154          | 3.374          |
| Biofuels   | 0.309                   | 0.414          | 0.513          | 0.595          | 0.795          |
| Biodiesel <sup>a</sup>   | 0.001                   | 0.002          | 0.004          | 0.012          | 0.032          |
| Biodiesel Feedstock b  | *                       | *              | *              | *              | *              |
| Ethanol c  | 0.175                   | 0.238          | 0.299          | 0.342          | 0.462          |
| Ethanol Feedstock d  | 0.133                   | 0.174          | 0.210          | 0.241          | 0.301          |
| Waste  | 0.402                   | 0.401          | 0.389          | 0.403          | 0.407          |
|  |                         |                |                |                |                |
| Landfill Gas   | 0.142                   | 0.141          | 0.144          | 0.148          | 0.150          |
| MSW Biogenic e   | 0.182                   | 0.165          | 0.164          | 0.168          | 0.171          |
| Other Biomass f  | 0.078                   | 0.096          | 0.081          | 0.088          | 0.086          |
| Wood and Derived Fuels   | 1.995                   | 2.002          | 2.121          | 2.156          | 2.172          |
| Geothermal   | 0.328                   | 0.331          | 0.341          | 0.343          | 0.343          |
| Hydroelectric Conventional                                     | 2.689                   | 2.825          | 2.690          | 2.703          | 2.869          |
| Solar/PV   | 0.064                   | 0.064          | 0.065          | 0.066          | 0.072          |
| Wind   | 0.105                   | 0.115          | 0.142          | 0.178          | 0.264          |
|  |                         |                |                |                | _              |
| sidential  | 0.449                   | 0.471          | 0.483          | 0.527          | 0.495          |
| Biomass  | 0.380                   | 0.400          | 0.410          | 0.450          | 0.410          |
| Wood and Derived Fuels g                                       | 0.380                   | 0.400          | 0.410          | 0.450          | 0.410          |
| Geothermal   | 0.010                   | 0.013          | 0.014          | 0.016          | 0.018          |
| Solar/PV h   | 0.059                   | 0.058          | 0.059          | 0.061          | 0.067          |
|  | A . A .                 | 0.4:-          |                | 0.4            | A              |
| Commercial   | 0.104                   | 0.113          | 0.118          | 0.119          | 0.117          |
| Biomass  | 0.095                   | 0.101          | 0.105          | 0.105          | 0.102          |
| Biofuels   | *                       | 0.001          | 0.001          | 0.001          | 0.001          |
| Ethanol c  | *                       | 0.001          | 0.001          | 0.001          | 0.001          |
| Waste  | 0.026                   | 0.029          | 0.034          | 0.034          | 0.036          |
| Landfill Gas   | 0.002                   | 0.002          | 0.002          | 0.003          | 0.004          |
| MSW Biogenic   | 0.020                   | 0.022          | 0.025          | 0.025          | 0.026          |
| Other Biomass f  | 0.004                   | 0.005          | 0.007          | 0.007          | 0.007          |
| Wood and Derived Fuels i                                       | 0.069                   | 0.071          | 0.070          | 0.070          | 0.065          |
| Geothermal   | 0.009                   | 0.011          | 0.012          | 0.070          | 0.003          |
| Hydroelectric Conventional                                     | *                       | 0.001          | 0.012          | 0.014          | 0.014          |
|  |                         | *****          | *****          |                | *****          |
| lustrial   | 1.723                   | 1.731          | 1.861          | 1.884          | 1.999          |
| Biomass  | 1.679                   | 1.684          | 1.824          | 1.848          | 1.966          |
| Biofuels   | 0.136                   | 0.178          | 0.217          | 0.248          | 0.311          |
| Ethanol c  | 0.003                   | 0.005          | 0.006          | 0.007          | 0.009          |
| Losses and Coproducts  | 0.133                   | 0.174          | 0.210          | 0.241          | 0.301          |
| Biodiesel Feedstock <sup>b</sup>                               | *                       | *              | *              | *              | *              |
| Ethanol Feedstock d  | 0.133                   | 0.174          | 0.210          | 0.241          | 0.301          |
| Waste  | 0.133                   | 0.174          | 0.210          | 0.241          | 0.301          |
|  |                         |                |                |                |                |
| Landfill Gas   | 0.079                   | 0.076          | 0.075          | 0.081          | 0.074          |
| MSW Biogenic e   | 0.005                   | 0.005          | 0.006          | 0.007          | 0.006          |
| Other Biomass f  | 0.063                   | 0.062          | 0.050          | 0.061          | 0.061          |
| Wood and Derived Fuels i                                       | 1.396                   | 1.363          | 1.476          | 1.452          | 1.515          |
| Geothermal   | 0.005                   | 0.003          | 0.004          | 0.004          | 0.004          |
| Hydroelectric Conventional                                     | 0.039                   | 0.043          | 0.033          | 0.032          | 0.029          |
| non outotion   | 0.170                   | 0.225          | 0.000          | 0.246          | 0.402          |
| ansportation   | 0.172                   | 0.235          | 0.296          | 0.346          | 0.483          |
| Biofuels   | 0.172                   | 0.235          | 0.296          | 0.346          | 0.483          |
| Biodiesel <sup>a</sup>   | 0.001                   | 0.002          | 0.004          | 0.012          | 0.032          |
| Ethanol <sup>c</sup>   | 0.171                   | 0.233          | 0.292          | 0.334          | 0.451          |
| p  | 2 445                   | 2 (01          | 2 502          | 2.550          | 2.025          |
| ectric Power <sup>j</sup>                                      | 3.445                   | 3.601          | 3.503          | 3.568          | 3.827          |
| Biomass  | 0.380                   | 0.397          | 0.388          | 0.406          | 0.412          |
| Waste  | 0.230                   | 0.230          | 0.223          | 0.221          | 0.231          |
| Landfill Gas   | 0.062                   | 0.063          | 0.066          | 0.065          | 0.073          |
| MSW Biogenic   | 0.157                   | 0.138          | 0.133          | 0.136          | 0.139          |
| Other Biomass f  | 0.010                   | 0.029          | 0.023          | 0.020          | 0.019          |
|  |                         | 0.167          | 0.165          | 0.185          | 0.182          |
| Wood and Derived Fuels <sup>1</sup>                            | (1171)                  |                |                |                |                |
| Wood and Derived Fuels <sup>i</sup><br>Geothermal              | 0.150<br>0.305          |                |                |                |                |
| Wood and Derived Fuels  Geothermal  Hydroelectric Conventional | 0.150<br>0.305<br>2.650 | 0.303<br>2.781 | 0.311<br>2.656 | 0.309<br>2.670 | 0.306<br>2.839 |

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Table 1.2. Renewable Energy Consumption by Energy Use Sector and Energy Source, 2002-2006 (Quadrillion Btu)

| Sector and Source | 2002  | 2003  | 2004  | 2005  | 2006  |
|-------------------|-------|-------|-------|-------|-------|
| Solar/PV          | 0.006 | 0.005 | 0.006 | 0.006 | 0.005 |
| Wind              | 0.105 | 0.115 | 0.142 | 0.178 | 0.264 |

- a Biodiesel primarily derived from soy bean oil.
- b Difference between the energy in biodiesel feedstocks (principally soy bean oil) and the energy in biodiesel consumed in the transportation sector.
- c Ethanol primarily derived from corn.
- d Difference between energy in ethanol feedstocks (primarily corn) and its coproducts (wet and dry distiller grains), and the energy in ethanol consumed in the transportation sector.
- e Includes paper and paper board, wood, food, leather, textiles and yard trimmings.
- f Agriculture byproducts/crops, sludge waste, and other biomass solids, liquids and gases.
- g Wood and wood pellet fuels.
- h Includes small amounts of distributed solar thermal and photovoltaic energy used in the commercial, industrial and electric power sectors.
- i Black liquor, and wood/woodwaste solids and liquids.
- j The electric power sector comprises electricity-only and combined-heat-power (CHP) plants within North American Classification System (NAICS) 22 category whose primary business is to sell electricity, or electricity and heat, to the public. PV=Photovoltaic.
- MSW=Municipal Solid Waste.
- \*=Less than 500 billion Btu.
- NA=Not Applicable.

Note: Data revisions are discussed in the Highlights section. Revisions to biomass removed MSW non-biogenic and tires from renewable waste energy. Totals may not equal sum of components due to independent rounding.

waste energy. Totals may not equal sum of components due to independent rounding.

Sources: Analysis conducted by Energy Information Administration, Office of Coal, Nuclear, Electric, and Alternate Fuels and specific sources described as follows. Residential: Energy Information Administration, Form EIA-457A/G, "Residential Energy Consumption Survey;" Oregon Institute of Technology, Geo-Heat Center; and Energy Information Administration, Form EIA-63-A, "Annual Solar Thermal Collector Manufacturers Survey" and Form EIA-63B, "Annual Photovoltaic Module/Cell Manufacturers Survey." Commercial: Energy Information Administration, Form EIA-906, "Power Plant Report", Form EIA-920, "Combined Heat and Power Plant Report;" and Oregon Institute of Technology, Geo-Heat Center. Industrial: Energy Information Administration, Form EIA-846 (A, B, C) "Manufacturing Energy Consumption Survey," Form EIA-906, "Power Plant Report" and Form EIA-920, "Combined Heat and Power Plant Report;" Oregon Institute of Technology, Geo-Heat Center; Government Advisory Associates, Resource Recovery Yearbook and Methane Recovery Yearbook, U.S. Environmental Protection Agency, Landfill Methane Outreach Program estimates; and losses and coproducts from the production of biodiesel and ethanol calculated as the difference between energy in feedstocks and production. Biofuels for Transportation: Biodiesel: 2001-2005: U.S. Department of Agriculture, Commodity Credit Corporation, Bioenergy Program estimates of production assigned to consumption and 2006 and forward: U.S. Department of Commerce, Bureau of Census, Current Industrial Reports, Fats and Oils - Production, Consumption and 2006 and forward: U.S. Department of Commerce, Bureau of Census, Current Industrial Reports, Fats and Oils - Production, Consumption and 2006 and forward: U.S. Department of Commerce, Bureau of Census, Current Industrial Reports, Fats and Oils - Production, Consumption and 2006 and forward: U.S. Department of Commerce, Bureau of Census, Current Industrial Reports, Fats and Oil