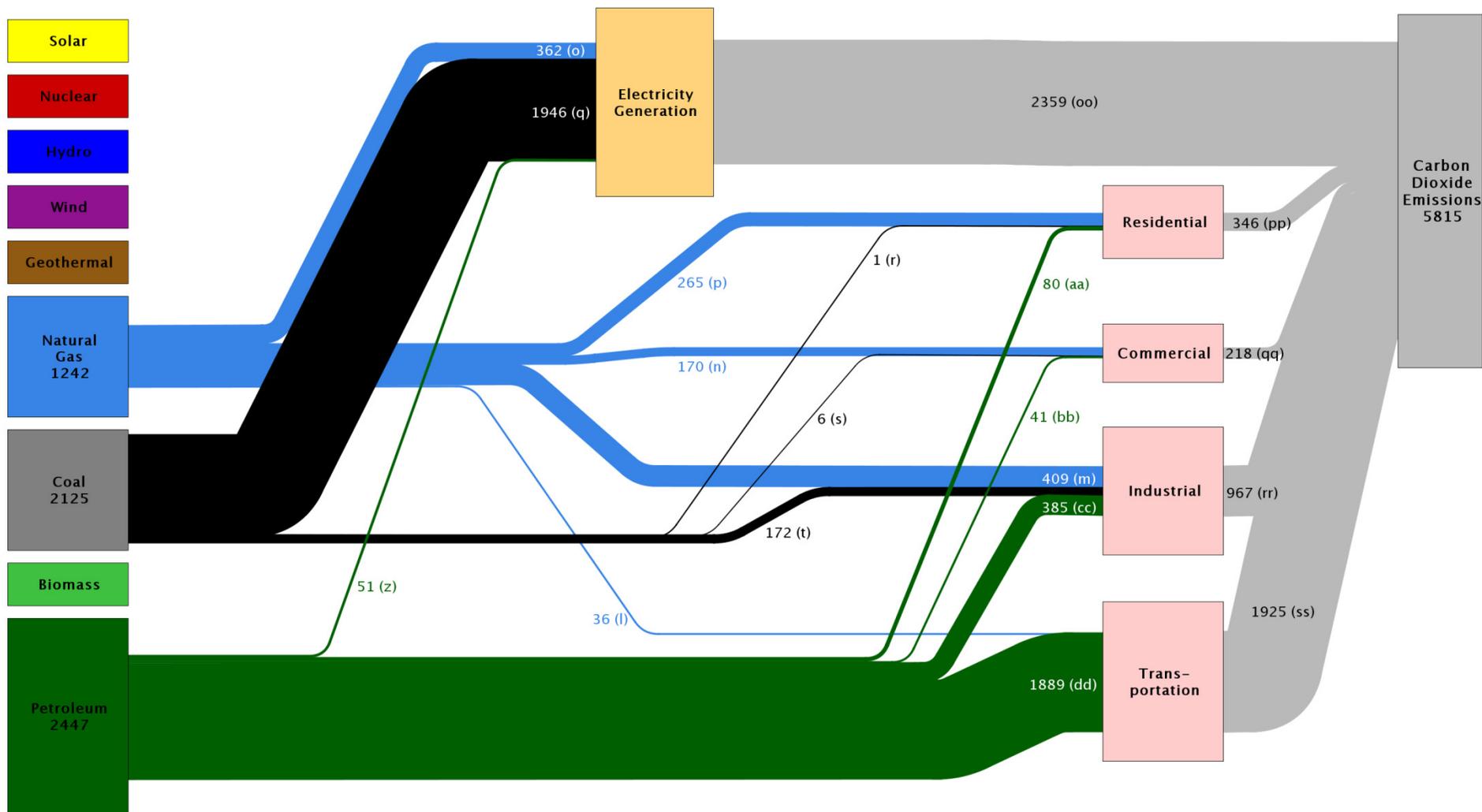


# Estimated U.S. Carbon Dioxide Emissions in 2008: ~5814 Million Metric Tons



Source: LLNL 2010. Data is based on DOE/EIA-0573(2008), December 2009. If this information or a reproduction of it is used, credit must be given to the Lawrence Livermore National Laboratory and the Department of Energy, under whose auspices the work was performed. Carbon embodied in industrial and commercial products such as plastics is not shown. The flow of petroleum to electricity production includes both petroleum fuels and the plastics component of municipal solid waste. The combustion of biologically derived fuels is assumed to have zero net carbon emissions - lifecycle emissions associated with biofuels are accounted for in the Industrial and Commercial sectors. Emissions from U.S. Territories and international aviation and marine bunkers are not included. Totals may not equal sum of components due to independent rounding. LLNL-MI-411167

U.S. Carbon Flowchart 2008  
Lawrence Livermore National Laboratory  
Release Notes

All carbon flow statistics are quoted from the U.S. Department of Energy's Energy Information Administration. These statistics can be found in the Emissions of Greenhouse Gases in the United States, report number DOE/EIA-0573(2008). The original document can be found at <http://www.eia.doe.gov/oiaf/1605/ggrpt/carbon.html>

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| (a) Emissions from Solar Energy in the Residential Sector<br>(No emissions, not shown)   | (k) Emissions from Geothermal Energy in the Industrial Sector<br>(No emissions, not shown)                         |
| (b) Emissions from Solar Energy in the Production of Electricity<br>(No emissions, not shown)  | (l) Emissions from Natural Gas in the Transportation Sector<br>Table 10, 2008 (Natural Gas)                        |
| (c) Emissions from Nuclear Energy in the Production of Electricity<br>(No emissions, not shown)  | (m) Emissions from Natural Gas in the Industrial Sector<br>Table 9, 2008 (Natural Gas)                             |
| (d) Emissions from Hydropower in the Production of Electricity<br>(No emissions, not shown)  | (n) Emissions from Natural Gas in the Commercial Sector<br>Table 8, 2008 (Natural Gas)                             |
| (e) Emissions from Hydropower in the Industrial Sector<br>(No emissions, not shown)  | (o) Emissions from Natural Gas in the Production of Electricity<br>Table 11, 2008 (Natural Gas)                    |
| (f) Emissions from Hydropower in the Commercial Sector<br>(No emissions, not shown)  | (p) Emissions from Natural Gas in the Residential Sector<br>Table 7, 2008 (Natural Gas)                            |
| (g) Emissions from Wind Energy in the Production of Electricity<br>(No emissions, not shown)   | (q) Emissions from Coal in the Production of Electricity<br>Table 11, 2008 (Coal)                                  |
| (h) Emissions from Geothermal Energy in the Production of Electricity<br>Table 11, 2008 (Geothermal)<br>(Not shown, value is less than one million metric tons per year) | (r) Emissions from Coal in the Residential Sector<br>Table 7, 2008 (Coal)  |
| (i) Emissions from Geothermal Energy in the Residential Sector<br>(No emissions, not shown)  | (s) Emissions from Coal in the Commercial Sector<br>Table 8, 2008 (Coal)   |
| (j) Emissions from Geothermal Energy in the Commercial Sector<br>(No emissions, not shown)   | (t) Emissions from Coal in the Industrial Sector<br>Table 9, 2008 (Coal)<br>+ Table 9 2008 (Coal Coke Net Imports) |

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|------|---|------|--|
| (u)  | Emissions from Biomass in the Production of Electricity<br>(No emissions, not shown, see chart footnote)          | (gg) | Consumption of Electricity in the Industrial Sector<br>(Not shown, no carbon is carried with electricity)    |
| (v)  | Emissions from Biomass in the Residential Sector<br>(No emissions, not shown, see chart footnote)                 | (hh) | Consumption of Electricity in the Commercial Sector<br>(Not shown, no carbon is carried with electricity)    |
| (w)  | Emissions from Biomass in the Commercial Sector<br>(No emissions, not shown, see chart footnote)                  | (ii) | Consumption of Electricity in the Residential Sector<br>(Not shown, no carbon is carried with electricity)   |
| (x)  | Emissions from Biomass in the Industrial Sector<br>(No emissions, not shown, see chart footnote)                  | (jj) | N/A  |
| (y)  | Emissions from Biomass in the Transportation Sector<br>(No emissions, not shown, see chart footnote)              | (kk) | N/A  |
| (z)  | Emissions from Petroleum in the Production of Electricity<br>Table 11, 2008 (Petroleum)<br>+ Table 11, 2008 (MSW) | (ll) | N/A  |
| (aa) | Emissions from Petroleum in the Residential Sector<br>Table 7, 2008 (Petroleum)                                   | (mm) | N/A  |
| (bb) | Emissions from Petroleum in the Commercial Sector<br>Table 8, 2008 (Petroleum)                                    | (nn) | N/A  |
| (cc) | Emissions from Petroleum in the Industrial Sector<br>Table 9, 2008 (Petroleum)                                    | (oo) | Total emissions from the production of electricity<br>Table 11, 2008 (Total)                                 |
| (dd) | Emissions from Petroleum in the Transportation Sector<br>Table 10, 2008 (Petroleum)                               | (pp) | Total primary emissions from the Residential Sector<br>Table 7, 2008 (Total)<br>- Table 7 (Electricity)      |
| (ee) | Domestic Production of Electrical Power<br>(Not shown, no carbon is carried with electricity)                     | (qq) | Total primary emissions from the Commercial Sector<br>Table 8, 2008 (Total)<br>- Table 8 (Electricity)       |
| (ff) | Consumption of Electricity in the Transportation Sector<br>(Not shown, no carbon is carried with electricity)     | (rr) | Total primary emissions from the Industrial Sector<br>Table 9, 2008 (Total)<br>- Table 9 (Electricity)       |
|      |   | (ss) | Total primary Emissions from the Transportation Sector<br>Table 10, 2008 (Total)<br>- Table 10 (Electricity) |