Americans using more fossil fuels

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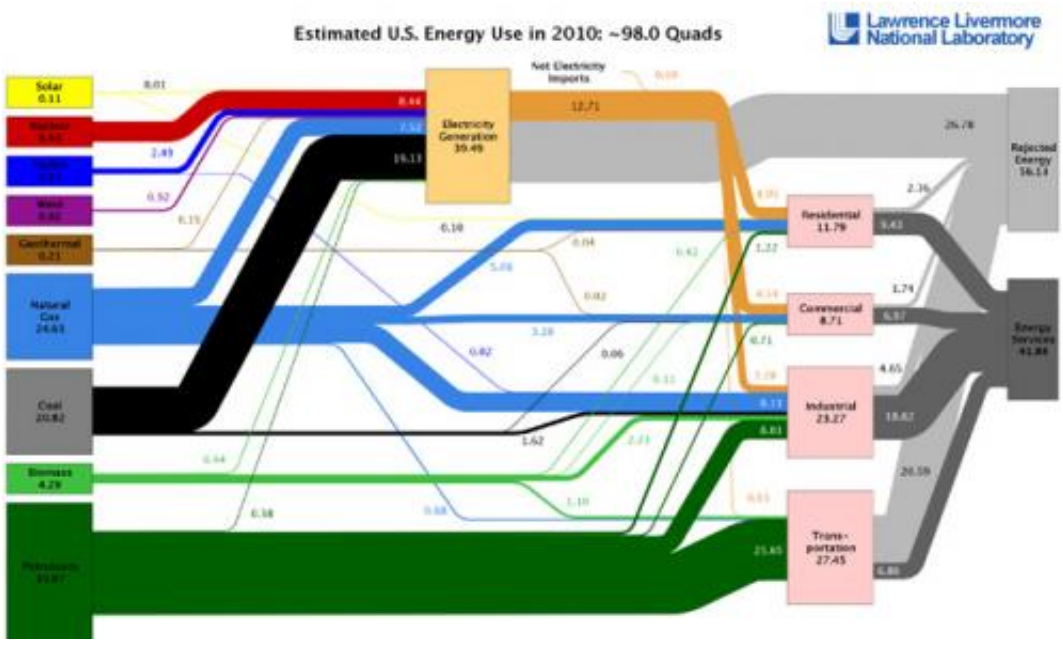

American energy use went back up in 2010 compared to 2009, when consumption was at a 12-year low. The United States used more fossil fuels in 2010 than in 2009, while renewable electricity remained approximately constant, with an increase in wind power offset by a modest decline in hydroelectricity. There also was a significant increase in biomass consumption, according to the most recent energy flow charts released by the Lawrence Livermore National Laboratory.

Wind power jumped from .70 quadrillion BTU, or quads, in 2009 to .92

quads in 2010. (A BTU or British Thermal Unit is a unit of measurement for energy and is equivalent to about 1.055 kilojoules) Most of that energy is tied directly to electricity generation and thus helps decrease the use of coal for electricity production. Biomass energy consumption rose from 3.88 quads to 4.29 quads. That increase was driven by ethanol use as a transportation fuel and a feedstock for industrial production. (The apparent decline in geothermal energy use is due to an accounting change by the Energy Information Administration.)

"We are still seeing the capacity additions from a wind energy boom come online," said. A.J. Simon, an LLNL energy systems analyst who develops the flow charts using data provided by the Department of Energy's Energy Information Administration. "And renewable fuel mandates are driving the consumption of ethanol by cars and trucks."

Overall, U.S. energy use in 2010 equaled 98 quads compared to the 94.6 quads used in 2009. Most of the energy was tied to coal, natural gas and petroleum.

Energy use in the residential, commercial, industrial and transportation arenas all rose as well.

The majority of energy use in 2010 was used for electricity generation (39.49 quads), followed by transportation, industrial, residential and commercial consumption. "This is just a snapshot of how the energy system was used," Simon said. "Although it doesn't appear to change much from year-to-year, even small shifts can have big consequences for certain sectors of our economy."

As in previous years, coal was the major player in producing electricity, with nuclear and natural gas coming in second and third, respectively. But natural gas consumption by the electric sector grew 0.5 quads this year, driven by consistently low natural gas prices. Over the past six

years, gas use in the electric sector has increased 25 percent.

Petroleum fuels continue to dominate the transportation sector.

Though carbon emissions in 2010 were higher than they were in 2009, Americans' carbon footprint has decreased over the past few years. The U.S. emitted 5,632 million metric tons of carbon dioxide in 2010, up from 5,428 in 2009, but down from the all time high of 6,022 in 2007. The decrease is due primarily to reduced energy consumption, but aided by a shift from coal to natural gas in the electric sector and adoption of renewable energy resources.

One metric ton of CO2 emissions is equivalent to 37.8 propane cylinders used for home barbecues or 2.1 barrels of oil consumed, according to the U.S. Environmental Protection Agency.

Provided by Lawrence Livermore National Laboratory