

World Per Capita Oil Consumption

1965 - 2009

John H. Walsh

Energy Advisor

The per capita consumption of oil and total primary energy were calculated for the world using data derived from the *BP Statistical Review of World Energy* (Web: www.bp.com) and the *CIA World Factbook*. (Web: www.cia.gov/publications/the-world-factbook/index.html)

World consumption of oil decreased -1.7% to 84.077 million barrels per day in 2009 following a record set two years before. As listed in the table and plotted in Figure 1, per capita consumption rose steadily from 1965 to 1973, declined erratically until 1982, and then stabilized thereafter. In 1965, per capita consumption was 3.45 barrels per year and the peak of 5.45 bbl/P/Y was reached in 1973. Per capita consumption has been remarkably constant since 1983 despite price changes, recessions, and even local wars. The average value for the 27 years inclusive from 1983-2009 was 4.54 bbl/P/Y with a standard deviation of 0.10 bbl/P/Y. In 2009, per capita consumption was 4.52 bbl/P/Y. Per capita consumption has tended to increase somewhat in recent years until the severe recession beginning in 2008. The per capita consumption of primary energy reached a first peak of 66.4 GJ/person in 1979 and, in 2009, fell -2.96% from the past year to 68.84 GJ/person.

Total world oil consumption reached a first maximum of 23.41 billion barrels per year (GB/Y) in 1979 and then declined to 21.18 GB/Y in 1983, a fall of 9.5% from the earlier peak. Oil consumption did not surpass this previous level until 23.52 GB were consumed in 1989. The world consumption of 30.69 GB in 2009 would fill a tank one kilometer in diameter and 6.2 km high.

During the past 27 years, total yearly oil consumption could have been projected with reasonable accuracy by simply multiplying the world population by the factor 4.54. This empirical constancy had tended to increase until the onset of recession.

Oil may be thought of as being consumed by two quite different groups of people: some 4.8 billion in developing countries who consume very little oil per person and about two billion in the developed countries who each consume a great deal. The situation is now complicated with the rapid growth in the three large developing countries of Brazil, China and India who are simultaneously entering the automotive age. In the richer developed countries, a slow overall decline in the use of oil may be underway due to increased efficiency in the end use of energy and the growing importance of natural gas. In the poorer developing countries, the oil age is still at an early stage of expansion. The balance between these opposing trends could be the explanation for the period of long stability in world per capita oil consumption though this situation is now complicated by the present world-wide recession.

It is still not clear what will happen in the large urban conurbations of over ten million people which are becoming more common around the world. There is little doubt, however, despite the severe problems with air quality that are being encountered in the main Chinese cities and elsewhere, as living standards rise, so does the ownership of private vehicles. Nevertheless, there are questions about the viable number of cars in such congested centres in the future. In 2009, the Canadian consumption of oil was 23.75 barrels per person which is some 23.8 times higher than the Indian consumption of 1.00 bbl/P. As illustrated in Figure 2, this ratio declined steadily until 2000 and then stabilized during the next seven years although there are some indications that the decline resumed in 2008. The consumption of oil in India did not exceed that in Canada until 1998.

The controversy as to when the peak in the world production of conventional oil will occur continues. Estimates range from essentially the present to 2038 or even not at all. The price of oil continued its strong increase to a new record in 2008 but then be-

gan a precipitous decline before rebounding in 2009.

In Figure 6 of the paper *Parabolic Projection of World Conventional Oil Production Based on Year 2000 Resource Assessment of the U.S. Geological Survey*, published in the Proceedings of the Canadian Association for the Club of Rome, Series 2, Number 3, Spring/Summer 2001 (Web: pages.ca.inter.net/~jhwalth/wusgs.html), the per capita production of the conventional grades of oil is predicted to begin falling soon over a wide range of possibilities for a conservative projection of world population in

which a peak of 8.0 billion is assumed in 2050. The results published here suggest an increase is occurring instead suggesting that a sharp break in this pattern will occur before too long, although declines resulting from the 2008-9 recession have complicated the situation.

June 2010

19 Lambton Avenue, Ottawa, Ontario, K1M 0Z6
Tel: 613-745-6279
E-Mail: jhwalth@ca.inter.net
Web: pages.ca.inter.net/~jhwalth/index.html

Consumption of World Oil Per Capita

Year	BBL/P	Year	BBL/P	Year	BBL/P	Year	BBL/P	Year	BBL/P
2009	4.52	2000	4.59	1991	4.50	1982	4.63	1973	5.45
2008	4.66	1999	4.61	1990	4.52	1981	4.83	1972	5.09
2007	4.73	1998	4.55	1989	4.52	1980	5.05	1971	4.84
2006	4.72	1997	4.59	1988	4.51	1979	5.35	1970	4.70
2005	4.73	1996	4.52	1987	4.46	1978	5.38	1969	4.39
2004	4.71	1995	4.41	1986	4.45	1977	5.31	1968	4.09
2003	4.60	1994	4.40	1985	4.40	1976	5.34	1967	3.86
2002	4.56	1993	4.37	1984	4.47	1975	5.13	1966	3.65
2001	4.57	1992	4.46	1983	4.52	1974	5.29	1965	3.45

Bbl/P = Barrels per Capita: Mean for 27-year period 1983 - 2009 inclusive = 4.54 Bbl/P; Value in 2009 - 4.52 Bbl/P

World Per Capita Oil Consumption
1965 - 2009

