# Oilwatch Monthly - January 2010

## Your coverage on the latest worldwide oil market developments

21 January 2010 - *(next update: 18 February 2010)*


**ASPO Netherlands**

**Rembrandt Koppelaar** +31 (0)6 44082419
contact@peakoil.nl
www.peakoil.nl


Powered by **www.theoildrum.com**

The Oil Drum
DISCUSSIONS ABOUT ENERGY AND OUR FUTURE

### The lower and upper limit to oil prices

Most oil price predictions by large analyst firms for 2010 lie in the range of 70 to 90 dollars per barrel. An expectation that the price level between 70 and 85 dollars since November while continue. After the price spike two years ago our collective minds refer to this 80 dollar per barrel level as normal, while only ten years ago it would have been uncalled for. An older example can be found in a scientific paper published back in 1987 in Energy Policy written by M.B. Morrison. Examining the lower and upper bounds of oil using a typical Hotelling extraction model from economics. Concluding that *"we could expect the price of oil to lie somewhere between $5/bbl and $20/bbl in 1987. By 2005, due to depletion, the price should rise to lie within the range $15/bbl to $30/bbl."* The actual oil price in 2005 proved to be a global average of 48 dollars per barrel and marginal costs of new supply in most countries nowadays lie between 60 and 80 dollars per barrel. The main error in Morrisons paper was caused by not including deepwater and unconventional oil environment in their 'ultimate' future production costs estimate, which was estimated at 15 dollars per barrel by 2005.

When we revisit estimates of lower and upper boundaries of oil prices these lie quite far apart. The absolute bottom price is determined by operational costs which for the most expensive regions is 25 dollars per barrel, while the upper boundary is set by the onset of large demand destruction in mainly the United States. The actual limit at which demand destruction occurs is not precisely known, however, as it is difficult to measure the economic effect of rising oil prices. Different studies give a boundary between 100 and 175 dollars per barrel. The main variable of causation used is the effect of high oil prices on the US economy, measured by taking the cost of oil for the US economy in percentage of US Gross Domestic Product (GDP). In 2008 oil prices rose to a cost level around 7% of US GDP during the summer peak of 147 dollars per barrel. The effect of the oil price rise in that period has been analyzed in a Brookings paper written by J. Hamilton, who concluded based on several autoregression analyses that "*had there been no oil shock, we would have described the U.S. economy from 4th quarter 2007 up to third quarter 2008 as growing slowly, but not in a recession.*"

**Rembrandt Koppelaar - President ASPO Netherlands**

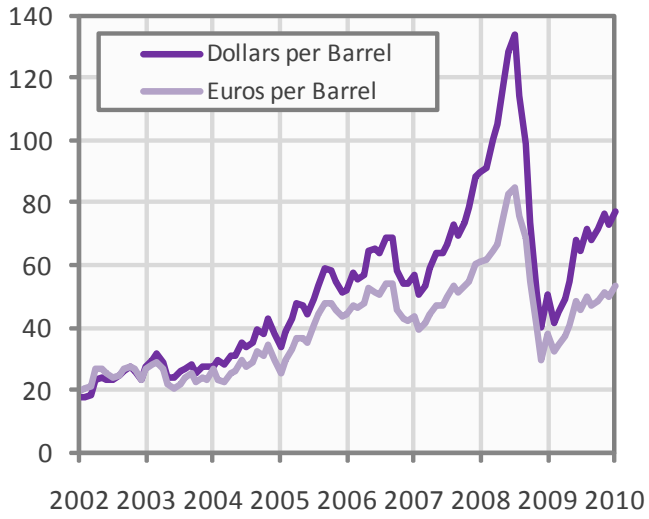
### Definitions

Crude Oil, petroleum found in liquid and semi liquid form including deepsea oil and lease condensates.

Liquids, all forms of liquid fuels including conventional, heavy, and extra heavy oil, oil shale, oil sands, natural gas liquids, lease condensates, gas-to-liquids, coal-to-liquids, and biofuels.

One Barrel of oil is equivalent to 159 litres

**Chart 1:** Oil Price Weighed Average of Blends




Source: Energy Information Admistration

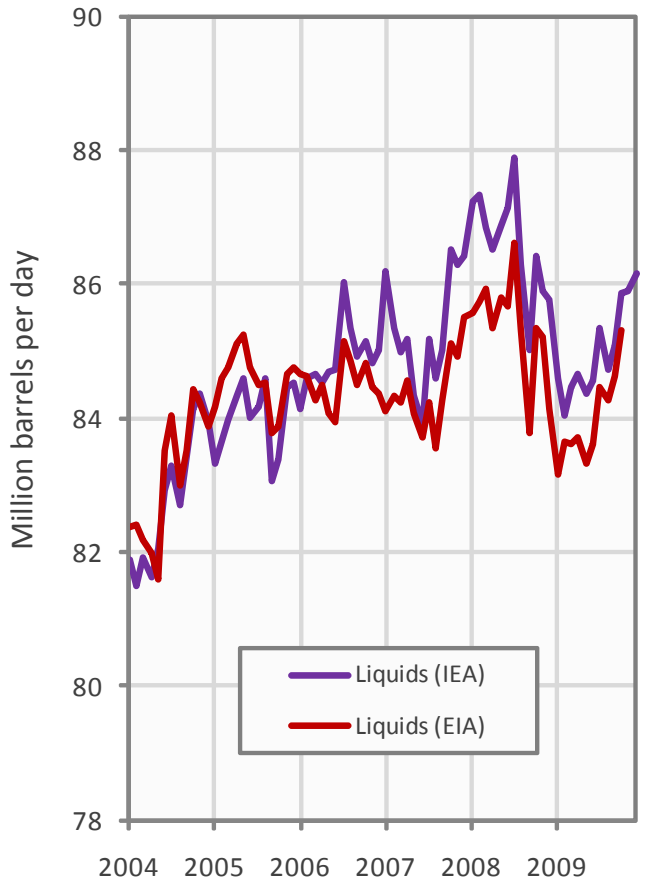
### Newsletter Index

**World liquid fuels production**
In December 2009 world production of all liquid fuels increased by 270,000 barrels per day from November according to the latest fgures of the International Energy Agency (IEA). Resulting in total world liquid fuels production of 86.17 million b/d. Liquids production for November 2009 was revised downwards in the IEA Oil Market Report of December from 85.94 to 85.9 million b/d. Average global liquid fuels production in 2009 was 84.97 versus 86.6 and 85.32 million b/d in 2008 and 2007.

**World crude oil production**
Latest figures from the Energy Information Administration (EIA) show that crude oil production including lease condensates increased by 592,000 b/d from September to October 2009. Resulting in total production of crude oil including lease condensates of 73.12 million b/d.

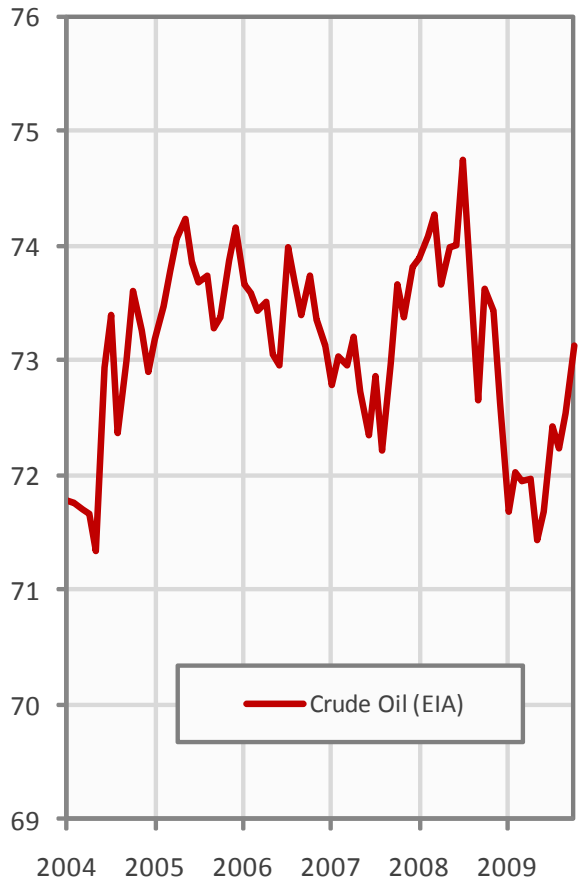
**World natural gas liquids production**
Natural Gas Liquids production from natural gas fields increased by 95,000 b/d from September to October 2009 according to the latest International Petroleum Monthly of the Energy Information Administration (EIA). Resulting in a total NGL production of 8.22 million b/d.

**Chart 2:** Liquids Production January 2004 - December 2009



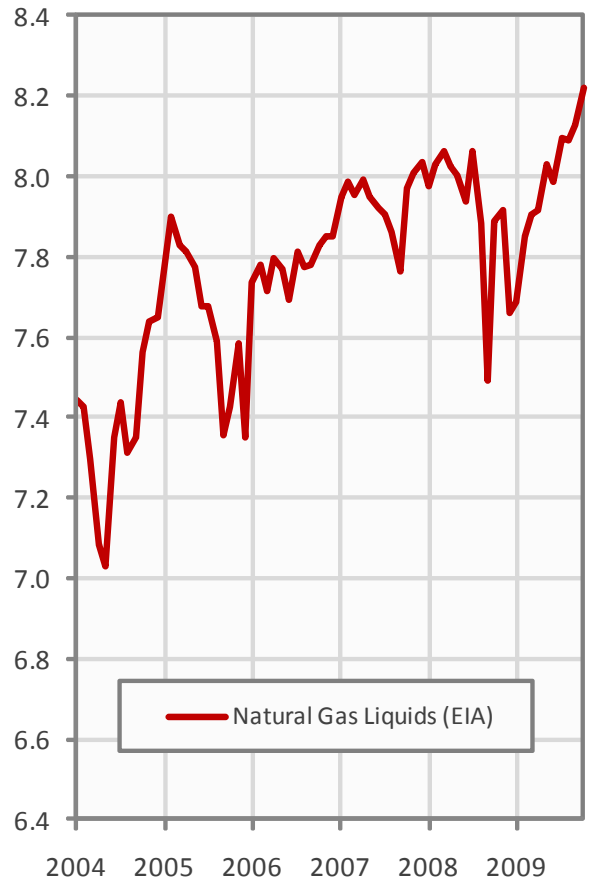

Source: International Energy Agency & Energy Information Administration

**Chart 3:** Crude Oil Production January 2004 - October 2009




Source: Energy Information Administration

**Chart 4:** Liquids Production January 2004 - October 2009



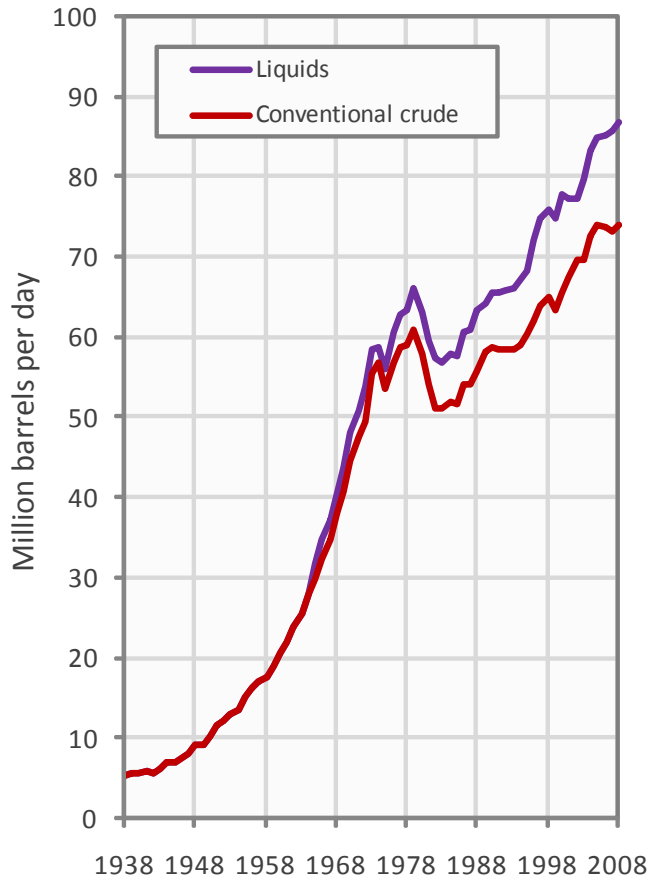

Source: Energy Information Administration

**World conventional crude versus liquids production ratio**
Approximately 85% of world liquid fuels production in 2008 came from conventional crude oil including lease condensates. The remaining share of 15% was produced by unconventional sources including Biofuels, Extra Heavy Oil, Tar Sands, Polar Oil and Natural Gas Liquids. In absolute amounts unconventional production has increased steadily, from 4 million b/d at the end of the 1970s, to approximately 12.9 mb/d in 2008, excluding lease condensates.

**World unconventional liquid fuels production**
In 2008 the biggest part of unconventional liquid fuels production came from Natural Gas Liquids at 11% or 7.94 million b/d. Secondly, extra heavy crude and bitumen at 3.4% or 2.68 million b/d of which 1.27 million b/d from Canadian oil sands and 1.41 million b/d from other sources. Thirdly, Biofuels at 1.8% or 1.45 million b/d. A and finally Polar Oil at a production rate of 840,000 b/d in 2008 or 1.1% of total liquids supply.

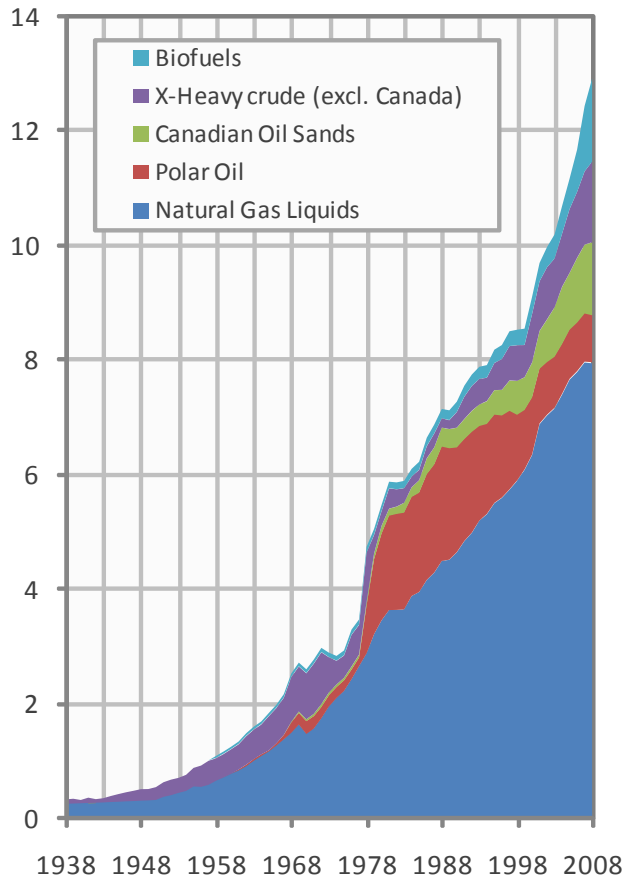
**World energy content from liquid fuels production**
In production statistics all liquid fuels are aggregated as total 'oil' production while containing different amounts of energy per barrel produced. For example, a barrel of crude oil contains around 5.8 million British Thermal Units while a similar barrel of natural gas liquids contains 4.2 million BTU. Conversion to BTU's shows that actual available energy worldwide in December 2009 was 3.3% lower than liquids statistics counted in barrels would suggest.

**Chart 5:** World Crude and Liquids production 1938 - 2008



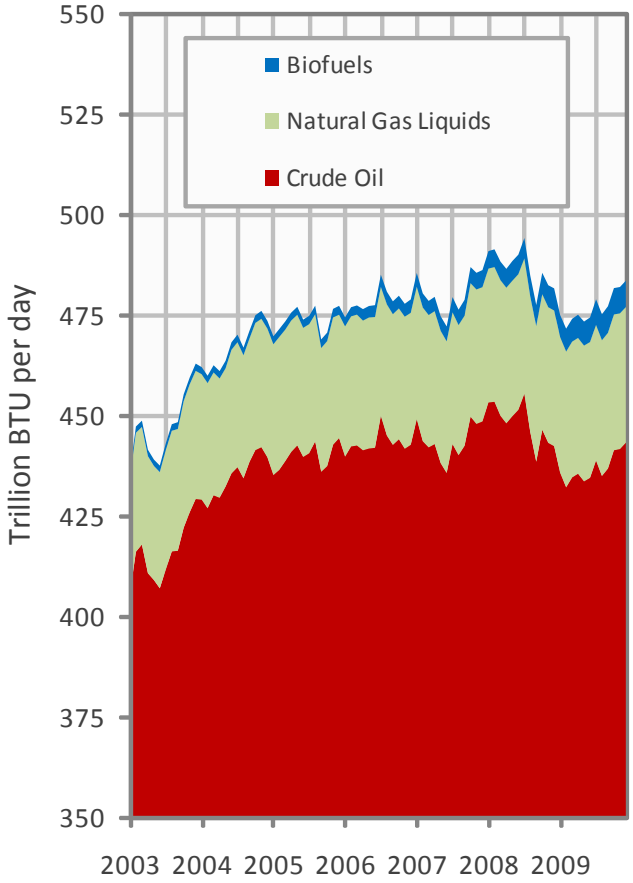

Source: International Energy Agency & Energy Information Administration

**Chart 6:** Unconventional Oil Production 1938 - 2008




Source: EIA, EIA & CAPP

**Chart 7:** World Production in BTU January 2003 - Dec. 2009



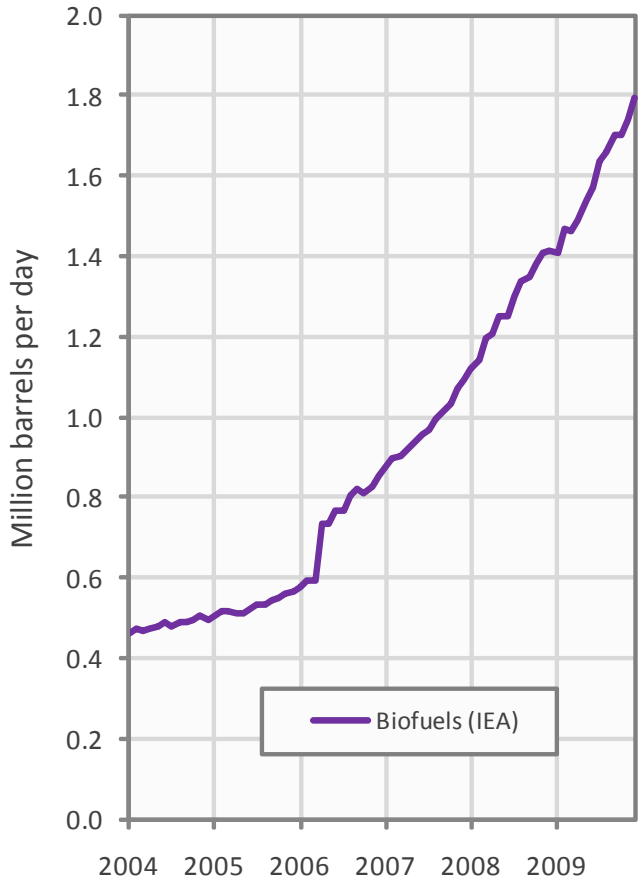

Source: International Energy Agency

**World biofuels production**
Total world biofuel in December 2009 is estimated to be 1.79 million b/d based on statistics compiled from the Energy Information Administration, the International Energy Agency and the Brazilian ministry of Energy. With an estimated 753,000 b/d from the United States, 610,000 b/d from Brazil and 430,000 b/d from other countries.

**IEA liquid fuels versus liquids excluding biofuels production**
Total liquid fuels production excluding biofuels in December 2009 is estimated to be 84.34 million b/d, an increase of 217,000 b/d from November production according to the latest figures of the International Energy Agency.

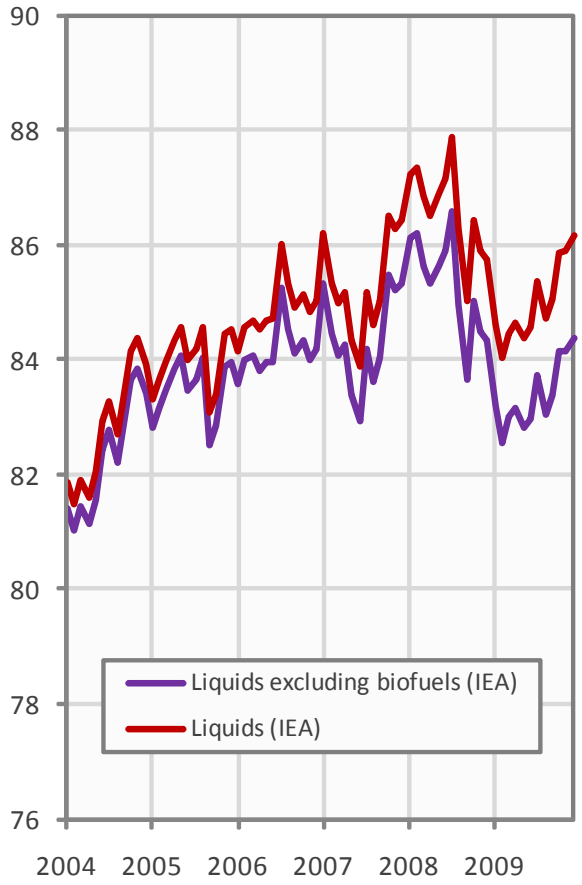
**EIA liquids versus IEA liquids excluding biofuels production**
Liquid fuels production figures published by the Energy Information Administration in their International Petroleum Monthly excludes biofuels produced in countries beside the United States and Brazil. The remaining difference is caused by discrepancies between natural gas liquids and Canadian unconventional oil production.

**Chart 8:** World Biofuels Production Jan. 2004 - December 2009



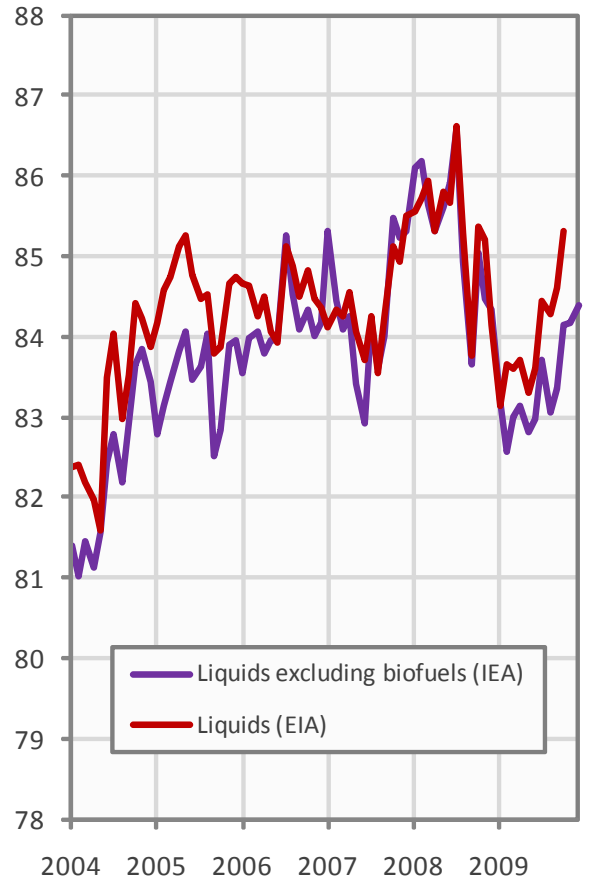

Source: IEA, EIA, Brazilian Ministry of Energy

**Chart 9:** IEA Liquids comparison January 2004 - December 2009




Source: Energy Information Administration

**Chart 10:** EIA & EIA Liquids Comparison Jan. 2004 - Dec. 2009



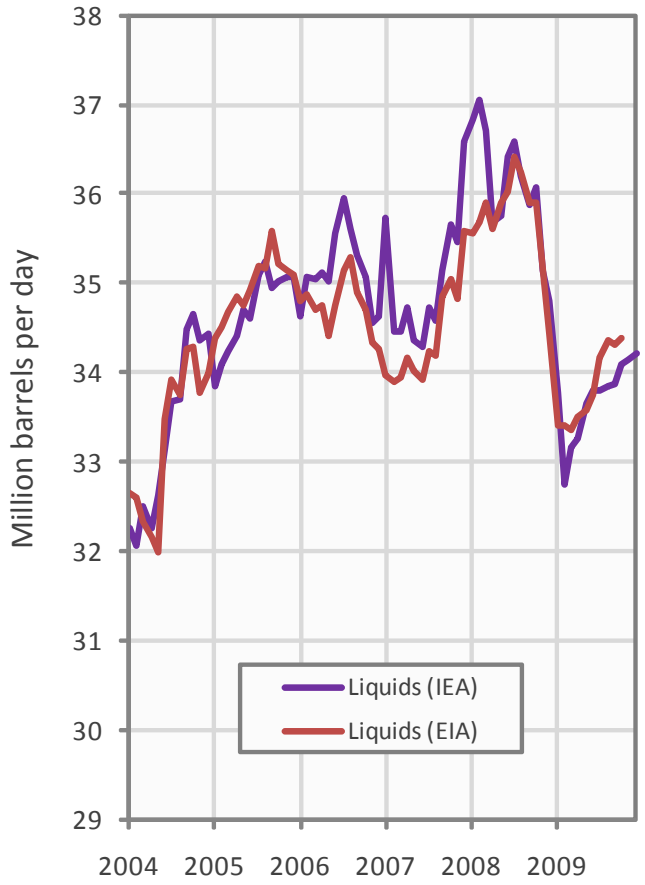

Source: Energy Information Administration

**OPEC liquid fuels production**
Total liquid fuels production in OPEC countries increased by 70,000 b/d from November to December to a level of 34.21 million b/d. Average liquid fuels production in 2009 was 33.7 million b/d, versus 36.09 and 35.02 million b/d in respectively 2008 and 2007. All time high production of OPEC liquid fuels stands at 36.58 million b/d reached in July 2008.

**OPEC crude oil production**
Total crude oil production excluding lease condensates of the OPEC cartel increased by 80,000 b/d to a level of 29.05 million b/d, from November to December 2009, according to the latest available estimate of the IEA. Average crude oil production in 2009 was 28.7 million b/d, versus 31.43 and 30.37 million b/d in respectively 2008 and 2007.

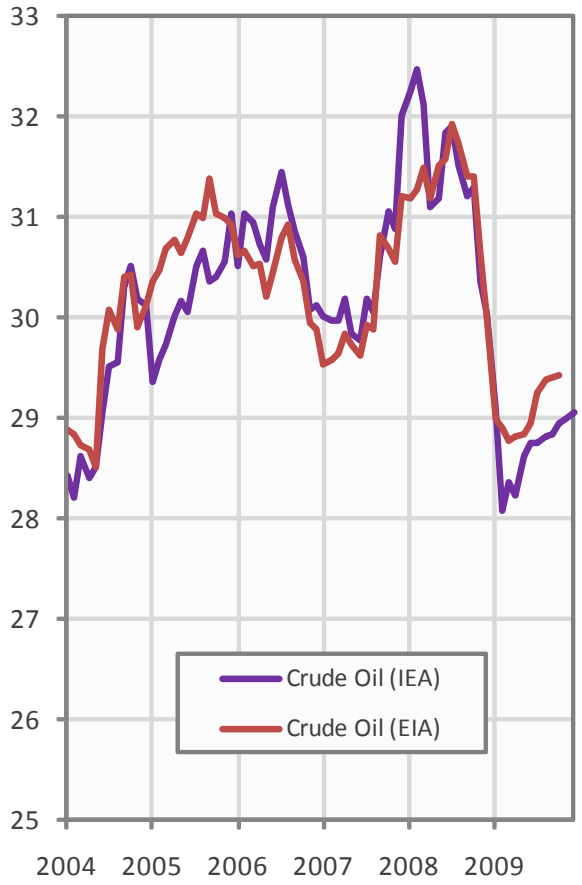
**OPEC natural gas liquids production**
OPEC natural gas liquids remained stable from November to December 2009 at a level of 5.17 million b/d. Average OPEC natural gas liquids production in 2009 up to November was 5.0 million b/d, versus 4.66 and 4.55 million b/d in respectively 2008 and 2007.

**Chart 11:** OPEC Liquids Production Jan. 2004 - December 2009



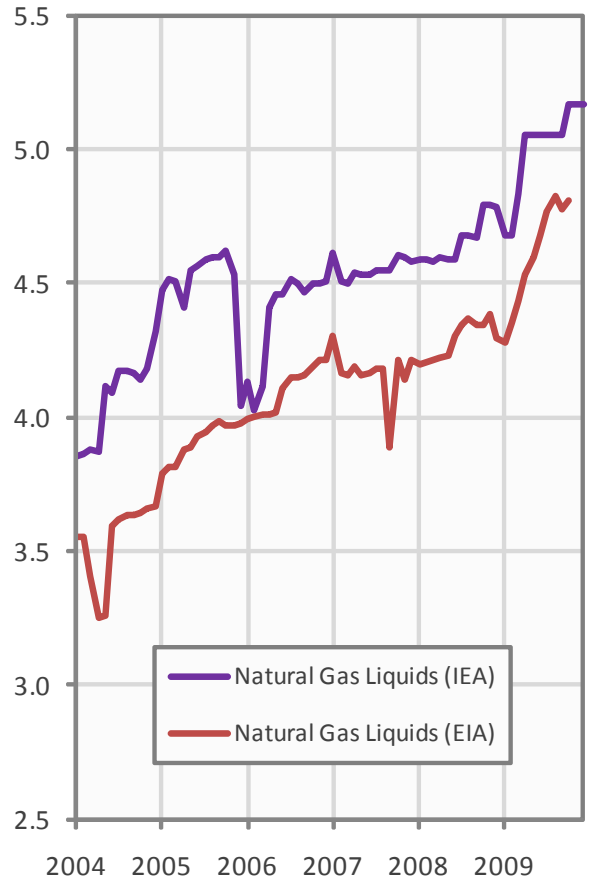

Source: International Energy Agency & Energy Information Administration

**Chart 12:** OPEC Crude Oil Production Jan. 2004 - Dec. 2009




Source: Energy Information Administration

**Chart 13:** OPEC NGL Production January 2004 - December 2009



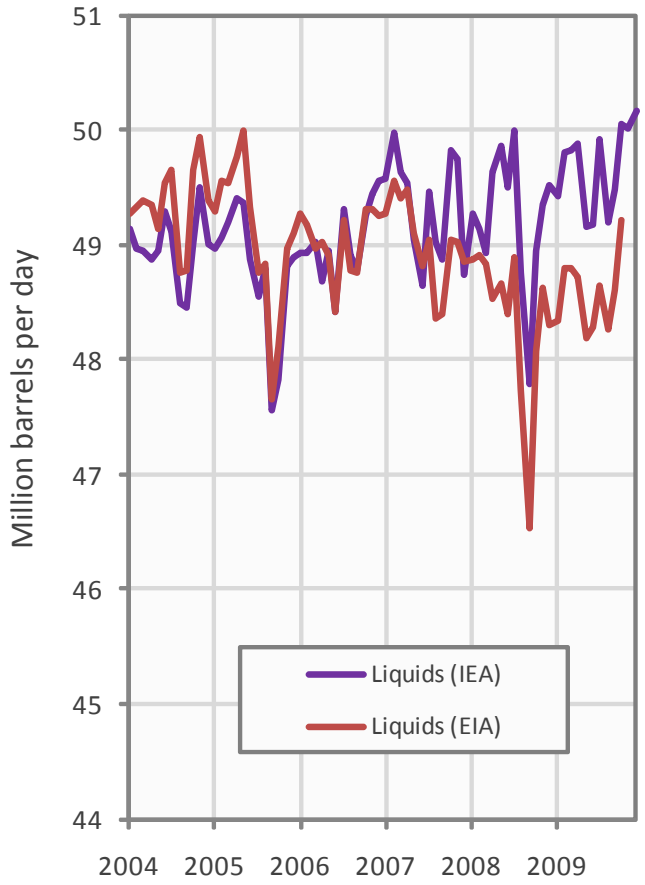

Source: Energy Information Administration

**Non-OPEC liquid fuels production**
Total liquid fuels production excluding biofuels in Non-OPEC countries increased by 147,000 b/d from November to December 2009. Resulting in a production level of 50.17 million b/d according to the International Energy Agency. Average liquid fuels production in 2009 was 49.68 million b/d, versus 49.32 and 49.34 million b/d in respectively 2008 and 2007.

**Non-OPEC crude oil production**
Total Non-OPEC crude oil production excluding lease condensates increased by 542,000 b/d to a level of 42.11 million b/d, from September to October 2009, according to the latest available estimate of the EIA. Average crude oil production in 2009 up to October was 41.51 million b/d, versus 41.32 and 41.80 million b/d in respectively 2008 and 2007.

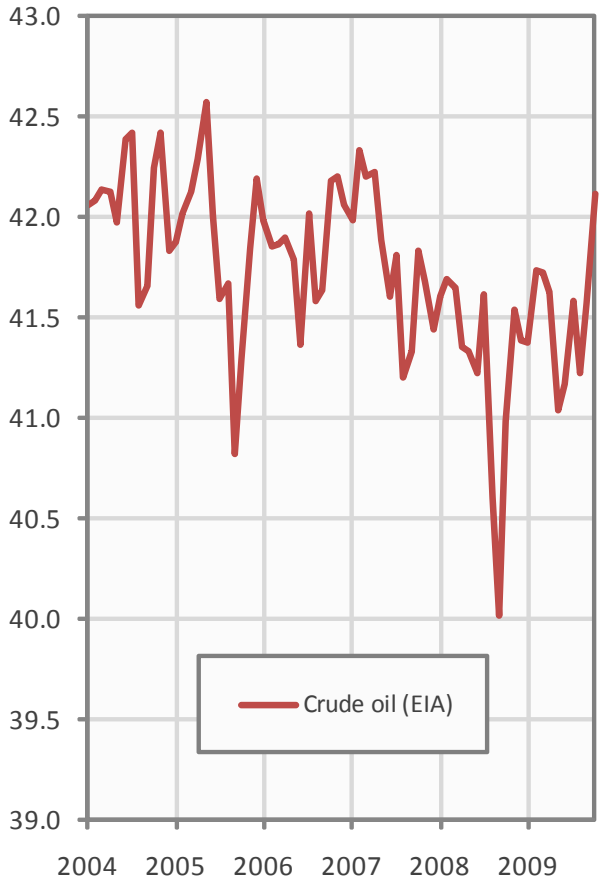
**Non-OPEC natural gas liquids production**
Non-OPEC natural gas liquids production increased by 61,000 from September to October to a level of 3.42 million b/d. Average Non-OPEC natural gas liquids production in 2009 up to October was 3.39 million b/d, versus 3.65 and 3.79 million b/d in respectively 2008 and 2007.

**Chart 14:** Non-OPEC Liquids Production Jan. 2004 - Dec. 2009



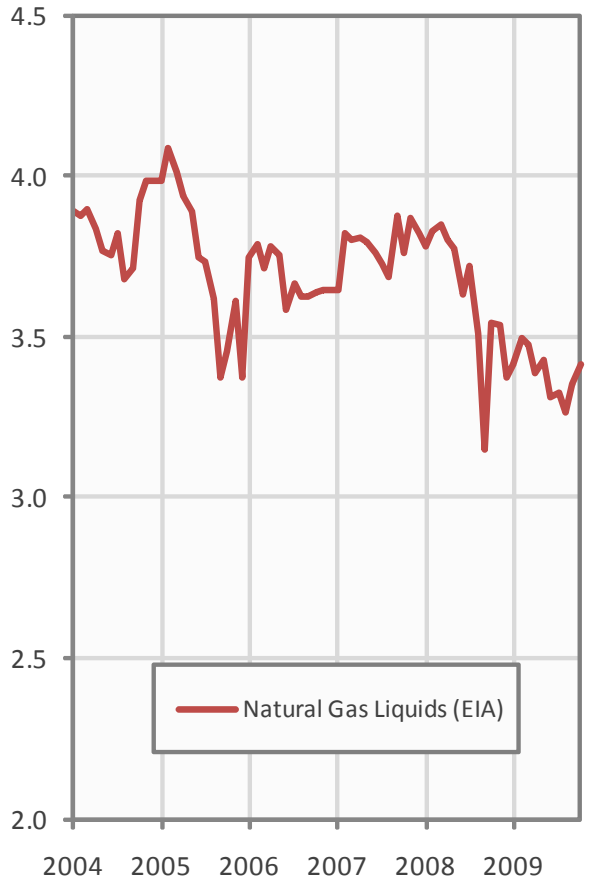

Source: International Energy Agency & Energy Information Administration

**Chart 15:** Non-OPEC Crude Oil Production Jan. 2004 - Oct. 2009




Source: Energy Information Administration

**Chart 16:** Non-OPEC NGL Production January 2004 - Oct. 2009



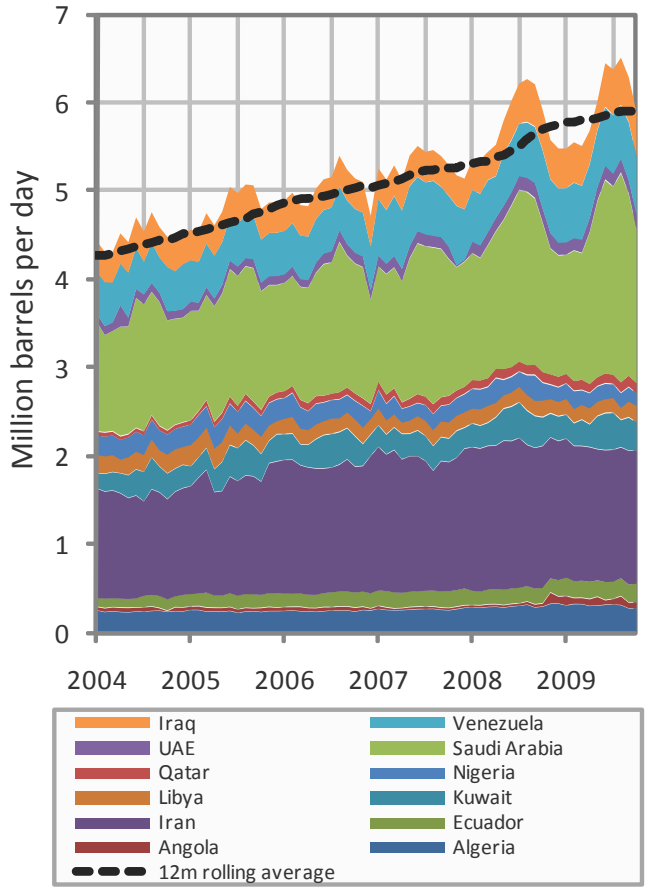

Source: Energy Information Administration

**OPEC oil consumption**
Oil consumption in all OPEC oil producers combined decreased by 394,000 b/d from September to October. Resulting in a consumption level of 5.89 million b/d. Average OPEC oil consumption in 2009 up to October was 5.97 million b/d, versus 5.76 and 5.30 million b/d in respectively 2008 and 2007.

**Iran oil consumption**
Oil consumption in Iran decreased by 10,000 b/d from September to October 2009 to a level of 1.51 million b/d. Average Iranian oil consumption in 2009 up to October was 1.51 million b/d, versus 1.64 and 1.52 million b/d in respectively 2008 and 2007.

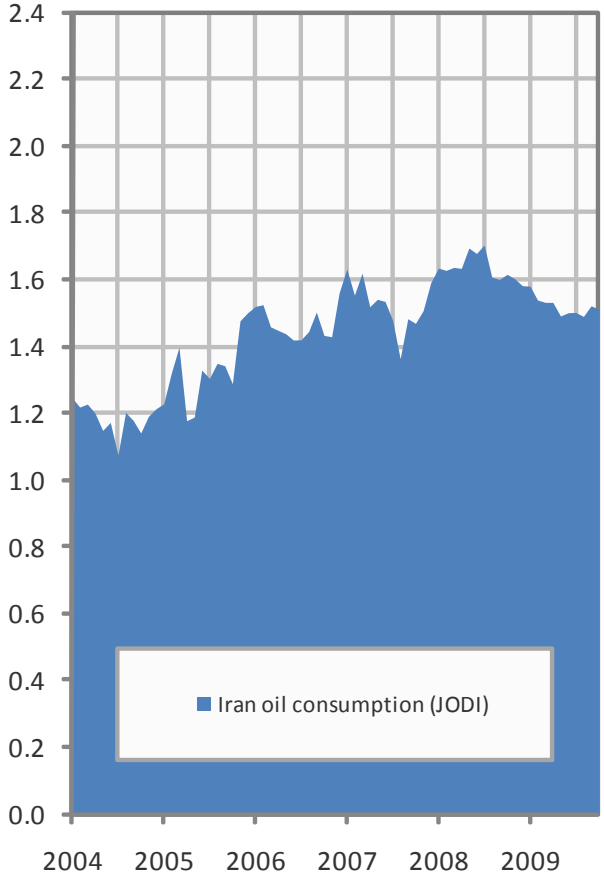
**Saudi Arabia oil consumption**
Oil consumption in Saudi Arabia decreased by 313,000 b/d from September to October 2009 to a level of 1.75 million b/d. Average Saudi Arabian oil consumption in 2009 up to October was 1.85 million b/d, versus 1.65 and 1.52 million b/d in respectively 2008 and 2007.

**Chart 17:** OPEC Oil Consumption January 2004 - Oct. 2009



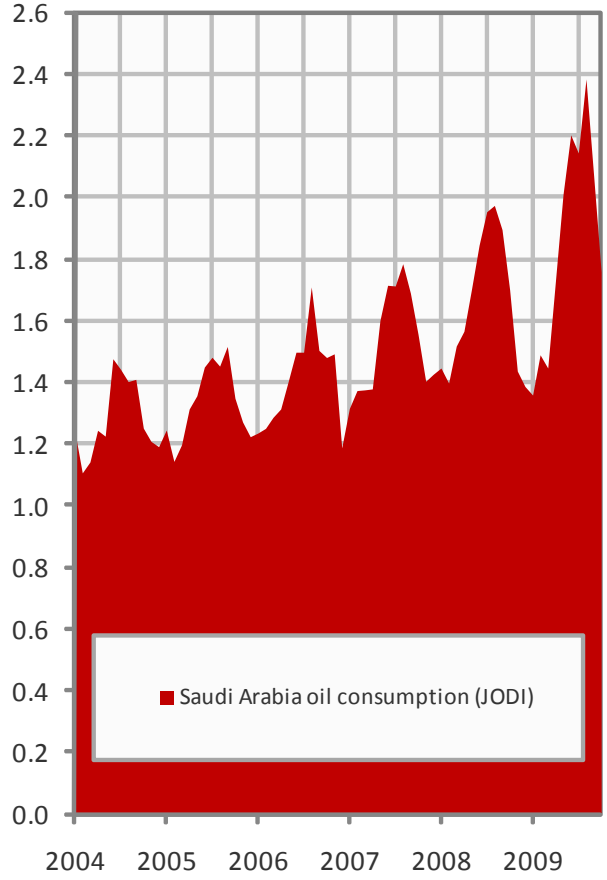

Source: Joint Oil Data Initiative

**Chart 18:** Iran Oil Consumption January 2004 - October 2009




Source: Joint Oil Data Initiative

**Chart 19:** Saudi Arabia Oil Consumption Jan. 2004 - Oct. 2009



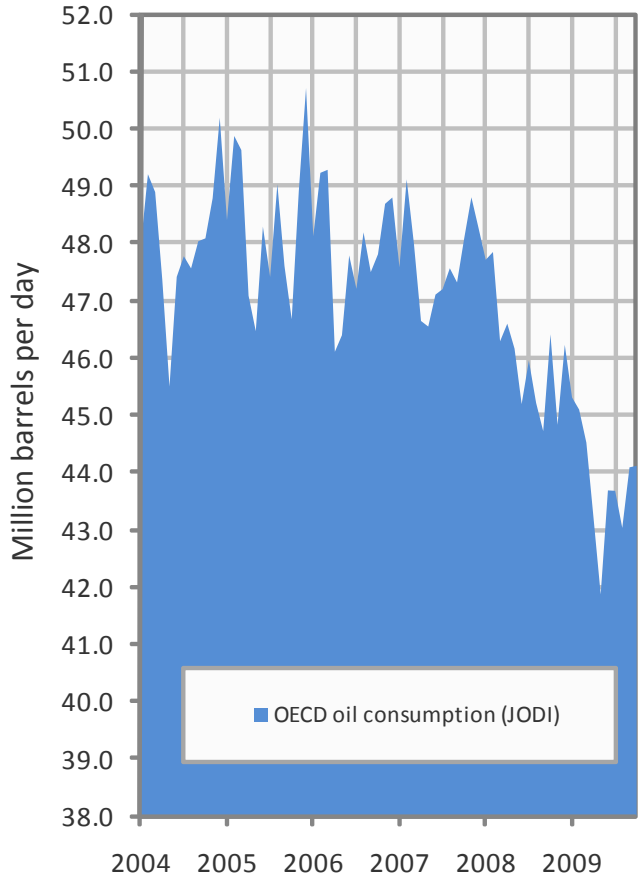

Source: Joint Oil Data Initiative

**OECD oil consumption**
Oil consumption in OECD countries increased by 25,000 b/d from September to October 2009. Resulting in a consumption level of 44.11 million b/d. Average OECD oil consumption in 2009 up to October was 43.86 million b/d, versus 46.10 and 47.68 million b/d in respectively 2008 and 2007.

**North America oil consumption**
Oil consumption in North America increased by 319,000 b/d from September to October 2009. Resulting in a consumption level of 22.84 million b/d. Average oil consumption in North America in 2009 up to October was 22.50 million b/d, versus 23.50 and 24.72 million b/d in respectively 2008 and 2007.

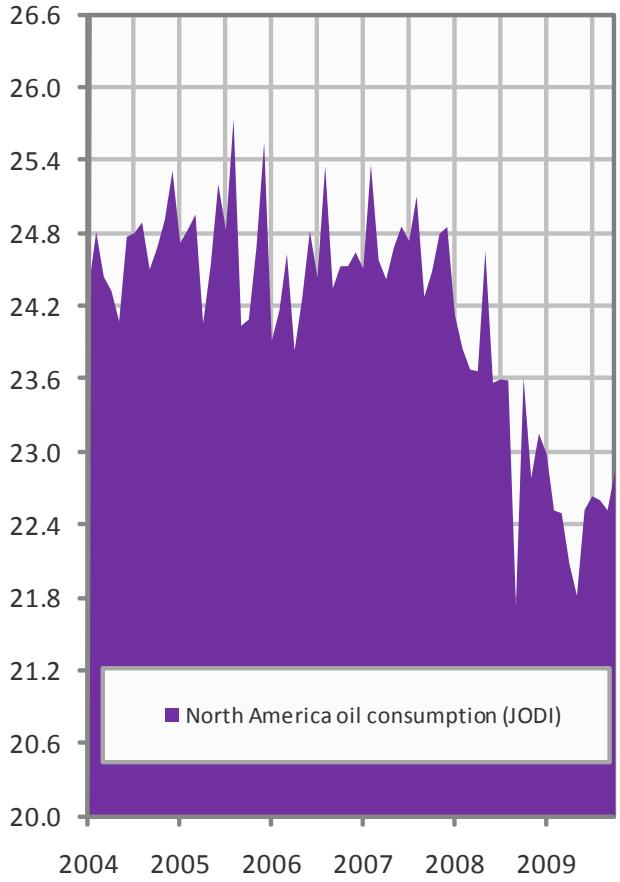
**European Union oil consumption**
Oil consumption in the European Union decreased by 625,000 b/d from September to October 2009. Resulting in a consumption level of 13.47 million b/d according to JODI statistics. Average consumption in the European Union in 2009 up to October was 13.6 million b/d, versus 14.25 and 14.32 million b/d in respectively 2008 and 2007.

**Chart 20:** OECD Oil Consumption January 2004 - Oct. 2009



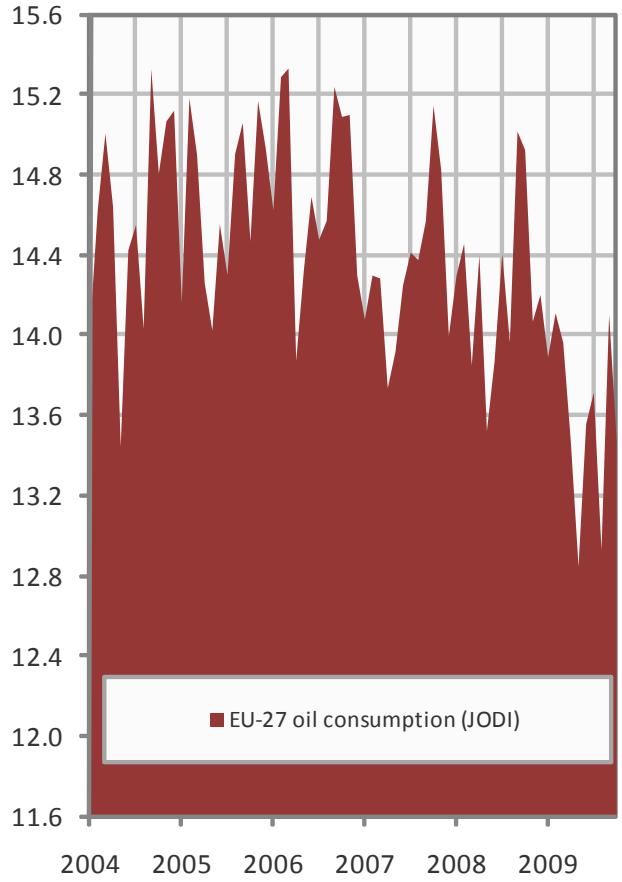

Source: Joint Oil Data Initiative

**Chart 21:** North America Oil Consumption Jan. 2004 - Oct. 2009




Source: Joint Oil Data Initiative

**Chart 22:** EU-27 Oil Consumption January 2004 - Oct. 2009



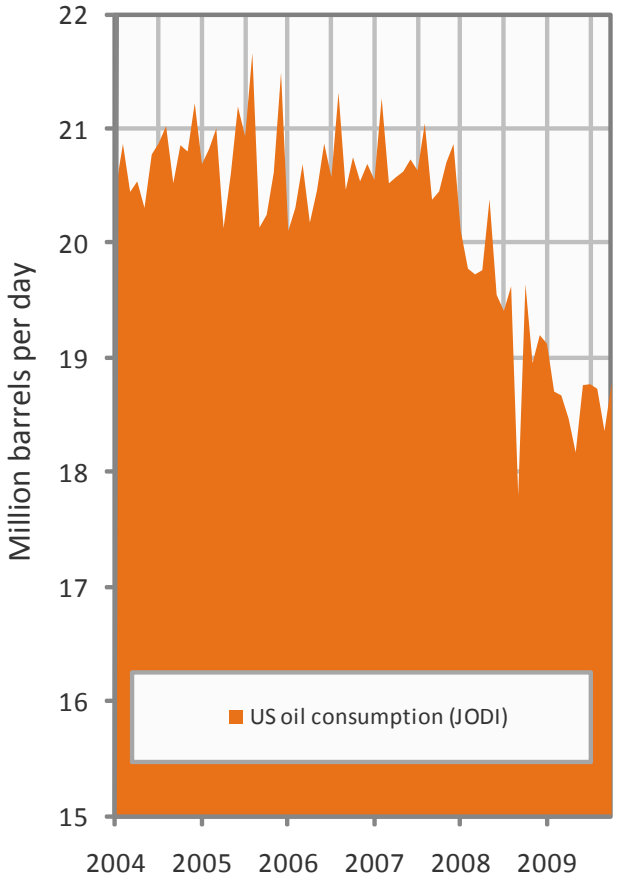

Source: Joint Oil Data Initiative

**United States oil consumption**
Oil consumption in the US increased by 421,000 b/d from September to October 2009. Resulting in a consumption level of 18.78 million b/d. Average consumption of oil in the US in 2009 up to September was 18.65 million b/d, versus 19.50 and 20.70 million b/d in respectively 2008 and 2007.

**Mexico oil consumption**
Oil consumption in Mexico decreased by 132,000 b/d from September to October 2009. Resulting in a consumption level of 1.93 million b/d. Average oil consumption in Mexico in 2009 up to October was 1.88 million b/d, versus 1.95 and 1.94 million b/d in respectively 2008 and 2007.

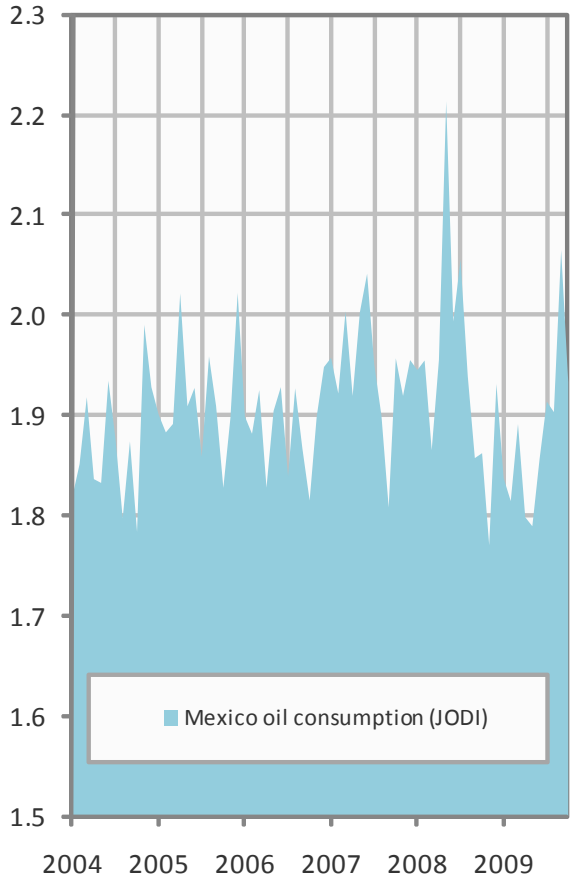
**Canada oil consumption**
Oil consumption in Canada increased by 30,000 b/d from September to October 2009. Resulting in a consumption level of 2.12 million b/d. Average consumption in Canada in 2009 up to October was 1.97 million b/d, versus 2.06 and 2.08 million b/d in respectively 2008 and 2007.

**Chart 23:** US Oil Consumption January 2004 - October 2009



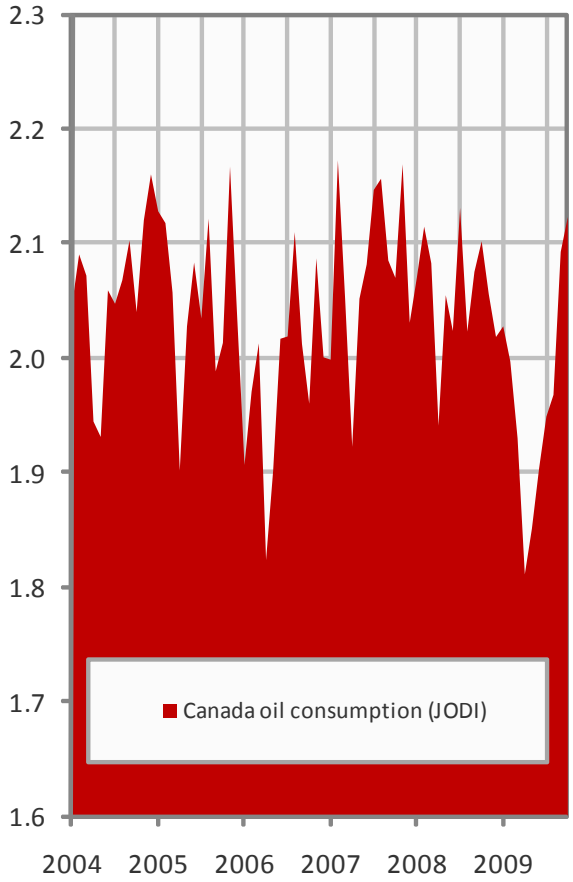

Source: Joint Oil Data Initiative

**Chart 24:** Mexico Oil Consumption Jan. 2004 - October 2009




Source: Joint Oil Data Initiative

**Chart 25:** Canada Oil Consumption January 2004 - Oct. 2009



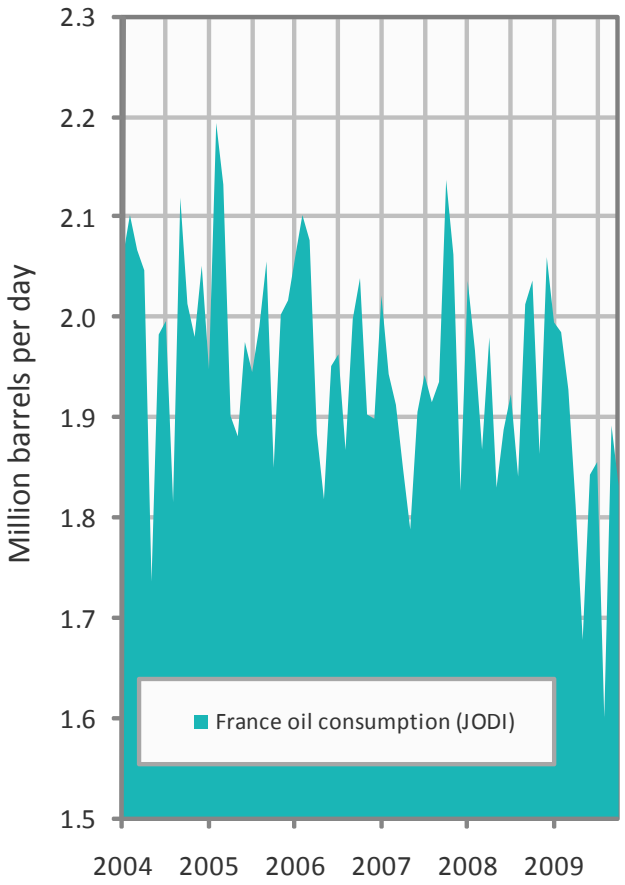

Source: Joint Oil Data Initiative

**France oil consumption**
Oil consumption in France decreased by 60,000 b/d from September to October 2009. Resulting in a consumption level of 1.83 million b/d. Average consumption of oil in France in 2009 up to October was 1.83 million b/d, versus 1.94 and 1.94 million b/d in respectively 2008 and 2007.

**Germany oil consumption**
Oil consumption in Germany decreased by 115,000 b/d from September to October 2009. Resulting in a consumption level of 2.41 million b/d. Average oil consumption in Germany in 2009 up to October was 2.44 million b/d, versus 2.56 and 2.47 million b/d in respectively 2008 and 2007.

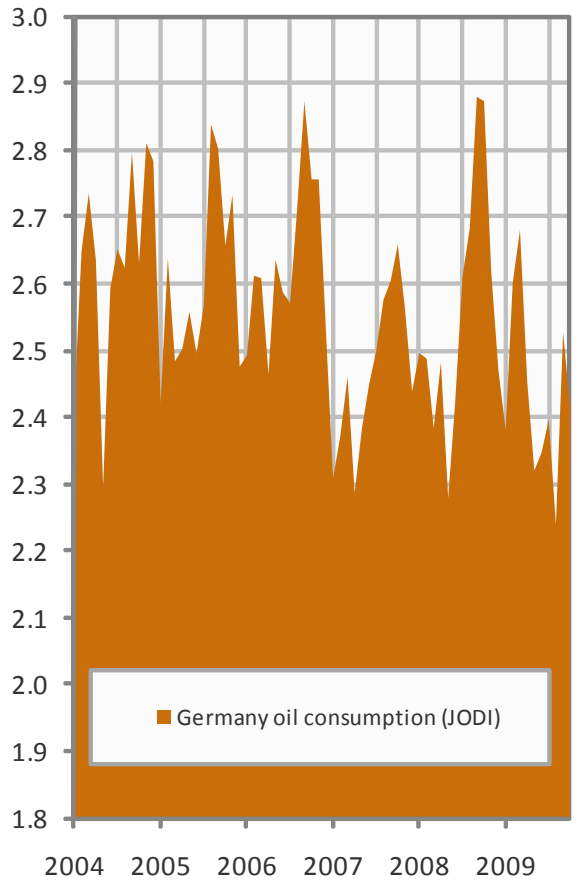
**Italy oil consumption**
Oil consumption in Italy increased by 5,000 b/d from September to October 2009. Resulting in a consumption level of 1.59 million. Average consumption in Italy in 2009 up to October was 1.53 million b/d, versus 1.60 and 1.67 million b/d in respectively 2008 and 2007.

**Chart 26:** France Oil Consumption January 2004 - Oct. 2009



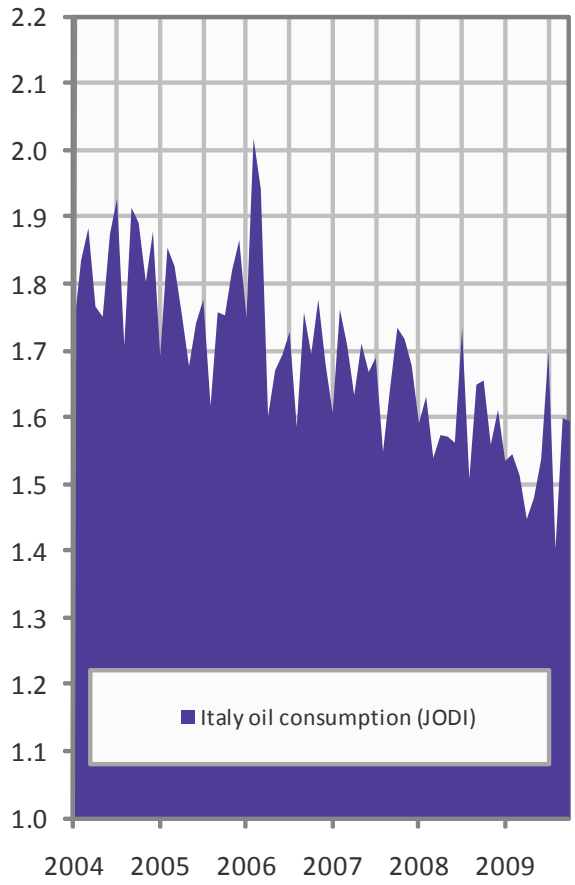

Source: Joint Oil Data Initiative

**Chart 27:** Germany Oil Consumption Jan. 2004 - Oct. 2009




Source: Joint Oil Data Initiative

**Chart 28:** Italy Oil Consumption January 2004 - October 2009



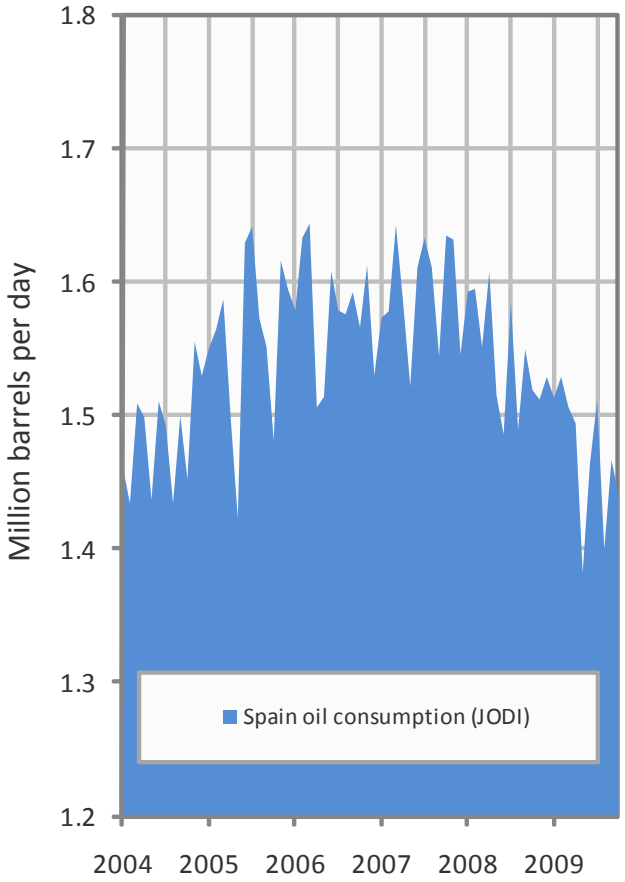

Source: Joint Oil Data Initiative

**Spain oil consumption**
Oil consumption in Spain decreased by 26,000 b/d from September to October 2009. Resulting in a consumption level of 1.44 million b/d. Average oil consumption in Spain in 2009 up to October was 1.47 million b/d, versus 1.54 and 1.59 million b/d in respectively 2008 and 2007.

**United Kingdom oil consumption**
Oil consumption in the United Kingdom decreased by 106,000 b/d from September to October 2009. Resulting in a consumption level of 1.48 million b/d. Average oil consumption in the United Kingdom in 2009 up to October was 1.48 million b/d, versus 1.61 and 1.67 million b/d in respectively 2008 and 2007.

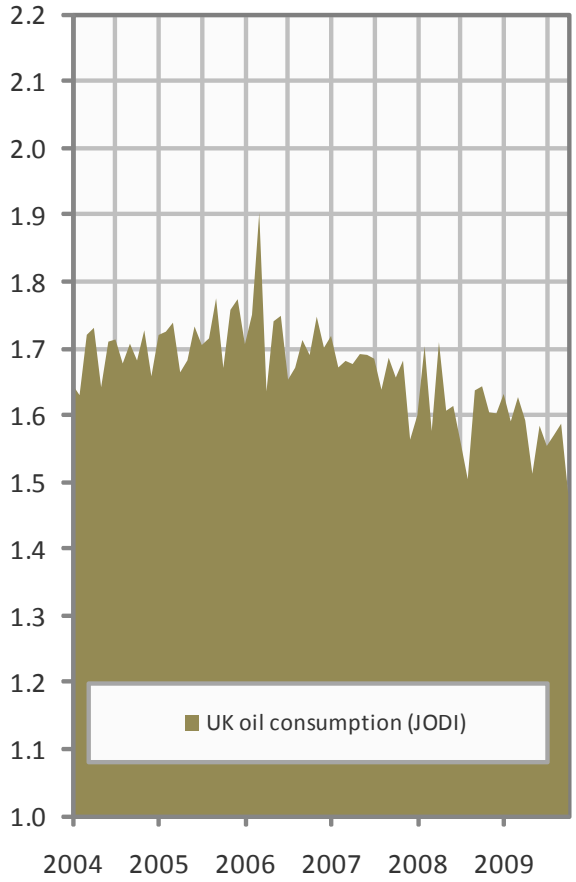
**Poland oil consumption**
Oil consumption in Poland decreased by 6,000 from September to October 2009. Resulting in a consumption level of 594,000 b/d. Average consumption in Poland in 2009 up to October was 530,000 b/d, versus 527,000 and 507,000 b/d in respectively 2008 and 2007.

**Chart 29:** Spain Oil Consumption January 2004 - Sept. 2009



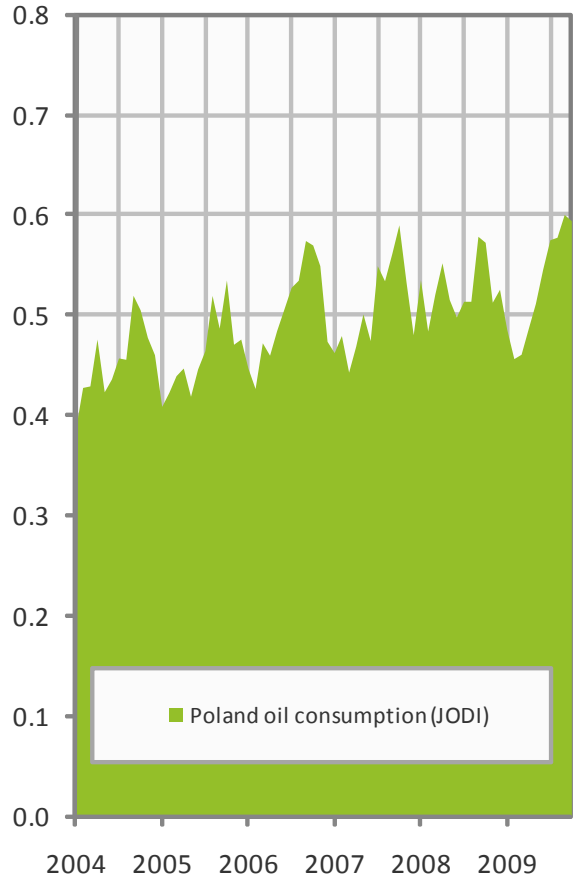

Source: Joint Oil Data Initiative

**Chart 30:** UK Oil Consumption Jan. 2004 - September 2009




Source: Joint Oil Data Initiative

**Chart 31:** Poland Oil Consumption January 2004 - Sept. 2009



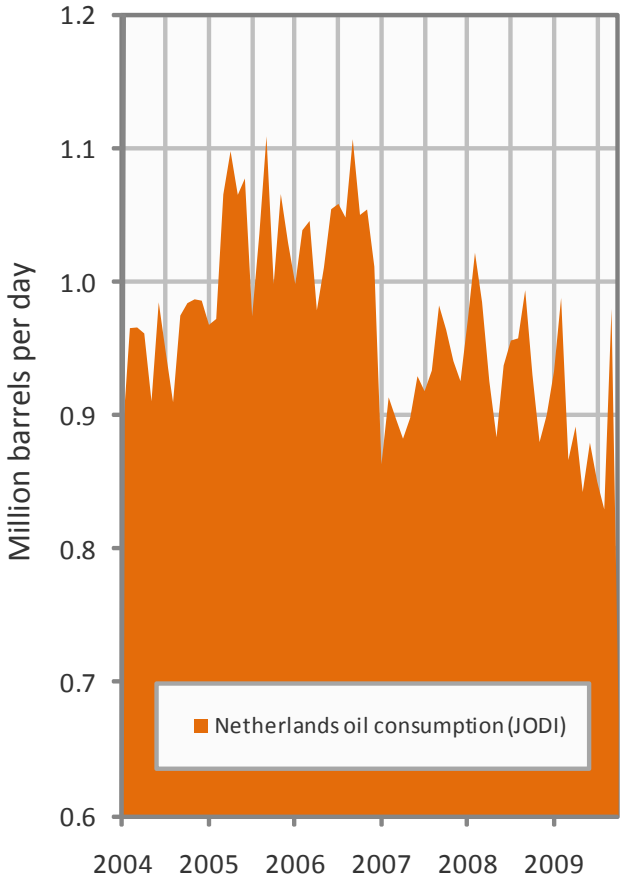

Source: Joint Oil Data Initiative

**Netherlands oil consumption**
Oil consumption in the Netherlands decreased by 303,000 b/d from September to October 2009 resulting in a consumption level of 676,000 b/d. Average oil consumption in the Netherlands in 2009 up to September was 873,000 b/d, versus 945,000 and 920,0000 b/d in respectively 2008 and 2007. Consumption figures for September 2009 were increased from 713,000 b/d to 979,000 b/d in the latest JODI update.

**Japan oil consumption**
Oil consumption in Japan increased by 178,000 b/d from September to October 2009. Resulting in a consumption level of 4.4 million b/d. Average oil consumption in Japan in 2009 up to October was 4.36 million b/d, versus 4.92 and 5.13 million b/d in respectively 2008 and 2007.

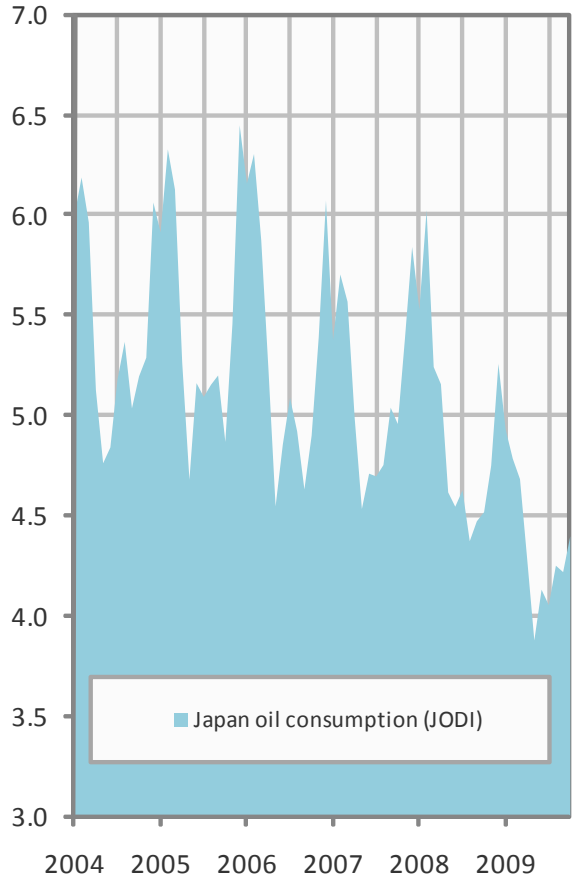
**South Korea oil consumption**
Oil consumption in South Korea increased by 131,000 b/d from September to October 2009. Resulting in a consumption level of 2.22 million b/d. Average consumption in South Korea in 2009 up to October was 2.23 million b/d, versus 2.21 and 2.29 million b/d in respectively 2008 and 2007.

**Chart 32:** Netherlands Oil Consumption Jan. 2004 - Oct. 2009



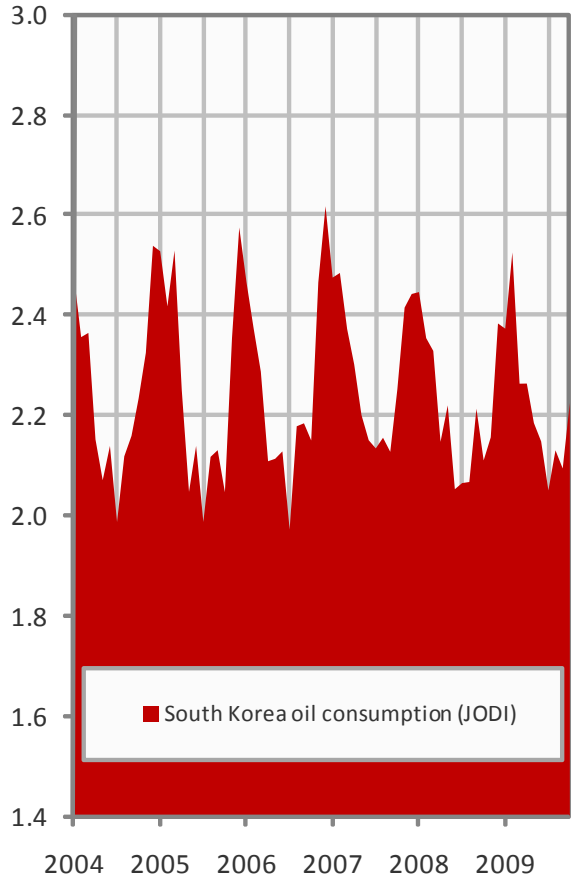

Source: Joint Oil Data Initiative

**Chart 33:** Japan Oil Consumption Jan. 2004 - October 2009




Source: Joint Oil Data Initiative

**Chart 34:** South Korea Oil Consumption Jan. 2004 - Oct. 2009



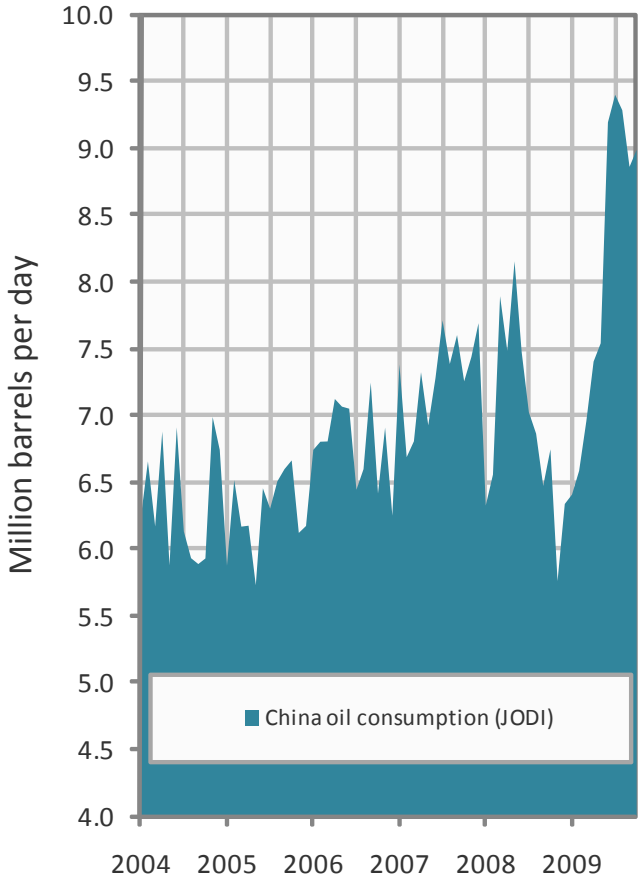

Source: Joint Oil Data Initiative

**China oil consumption**
Oil consumption in China increased by 127,000 b/d from September to October 2009. Resulting in a consumption level of 8.98 million b/d according to JODI statistics. Average oil consumption in China in 2009 up to October was 8.06 million b/d, versus 6.92 and 7.29 million b/d in respectively 2008 and 2007.

**India oil consumption**
Oil consumption in India increased by 103,000 b/d from September to October 2009. Resulting in a consumption level of 2.82 million b/d. Average oil consumption in India in 2009 up to October was 2.84 million b/d, versus 2.60 and 2.43 million b/d in respectively 2008 and 2007.

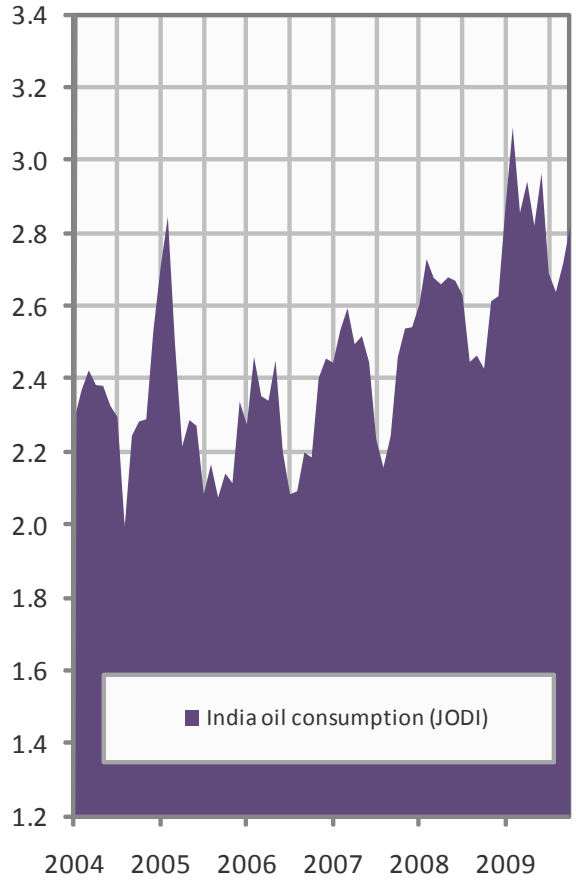
**Taiwan oil consumption**
Oil consumption in Taiwan remained stable from September to October 2009 at a level of 990,000 b/d. Average consumption in Taiwan in 2009 up to October was 973,000 b/d, versus 978,000 and 958,000 b/d in respectively 2008 and 2007.

**Chart 35:** China Oil Consumption January 2004 - October 2009



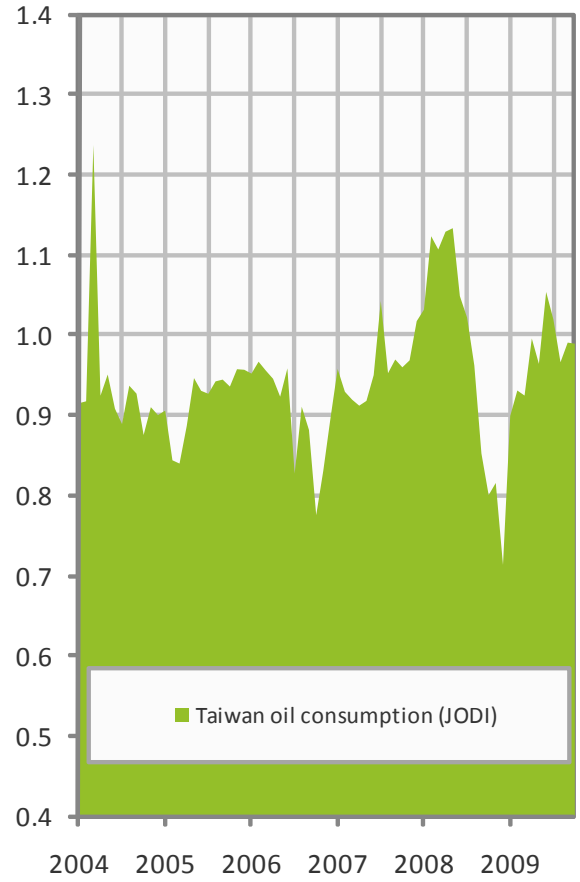

Source: Joint Oil Data Initiative

**Chart 36:** India Oil Consumption Jan. 2004 - October 2009




Source: Joint Oil Data Initiative

**Chart 37:** Taiwan Oil Consumption January 2004 - October 2009



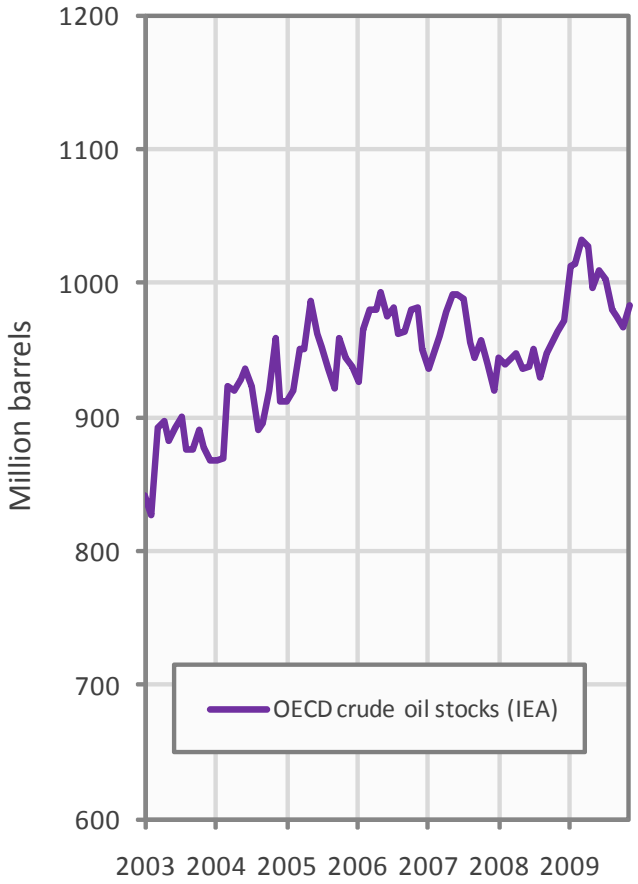

Source: Joint Oil Data Initiative

**OECD crude oil stocks**
Industrial inventories of crude oil in the OECD in November 2009 increased to 984 million from 967 million barrels in October according to the latest IEA statistics. Current OECD crude oil stocks are 22 million barrels higher than the five year average of 962 million barrels. In the December Oil Market Report of the IEA a total stock level of 968 million barrels was tabulated for October which has been revised downwards to 967 million barrels in the January edition.

**OECD product stocks**
Industrial product stocks in the OECD in November 2009 remained stable at 1466 from October levels according to the latest IEA Statistics. Current OECD product stocks are 64 million barrels higher than the five year average of 1402 million barrels. In the November Oil Market Report of the IEA a total stock level of 1499 million barrels was tabulated for October which has been revised downwards to 1466 million barrels in the December edition.

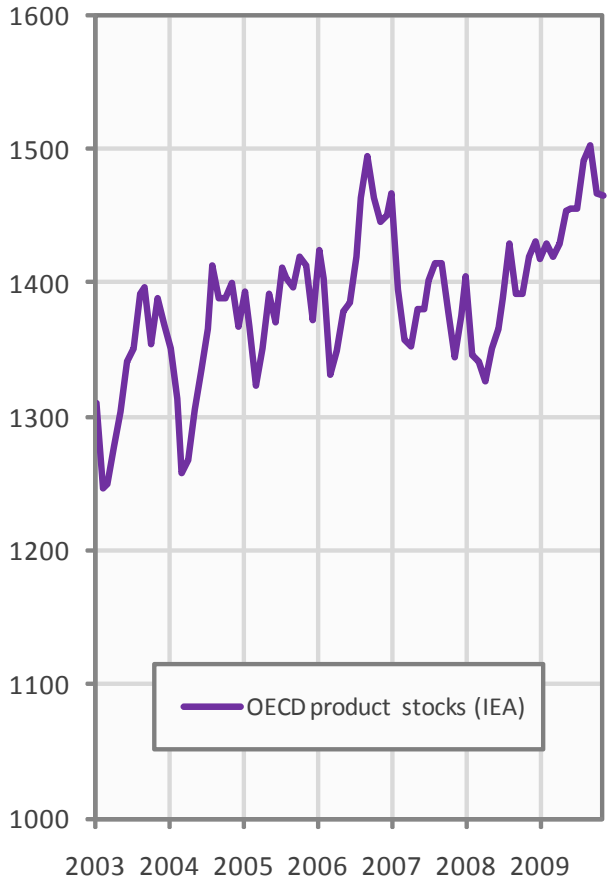
**Europe crude oil stocks**
Industrial inventories of crude oil in OECD Europe in November 2009 increased to 342 from 322 million barrels in October according to the latest IEA statistics. Current OECD Europe crude oil stocks are 6 million barrels higher than the five year average of 336 million barrels. In the December Oil Market Report of the IEA a total stock level of 329 million barrels was tabulated for October which has been revised downwards to 322 million barrels in the January edition.

**Chart 38:** OECD Crude Oil Stocks January 2004 - October 2009



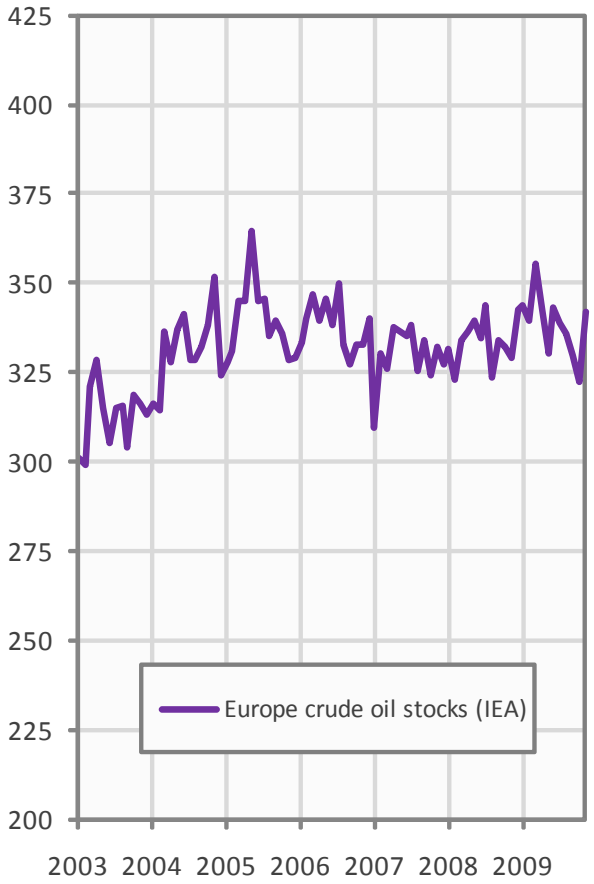

Source: International Energy Agency

**Chart 39:** OECD Product Stocks January 2004 - October 2009




Source: International Energy Agency

**Chart 40:** Europe Crude Oil Stocks January 2004 - October 2009




Source: International Energy Agency

**Europe product stocks**

Industrial product stocks in OECD Europe in November 2009 increased to 570 million from 566 million barrels in October according to the latest IEA statistics. Current OECD Europe product stocks are 19 million barrels higher than the five year average of 551 million barrels. In the December Oil Market Report of the IEA a total stock level of 573 million barrels was tabulated for October which has been revised downwards to 566 million barrels in the December edition.

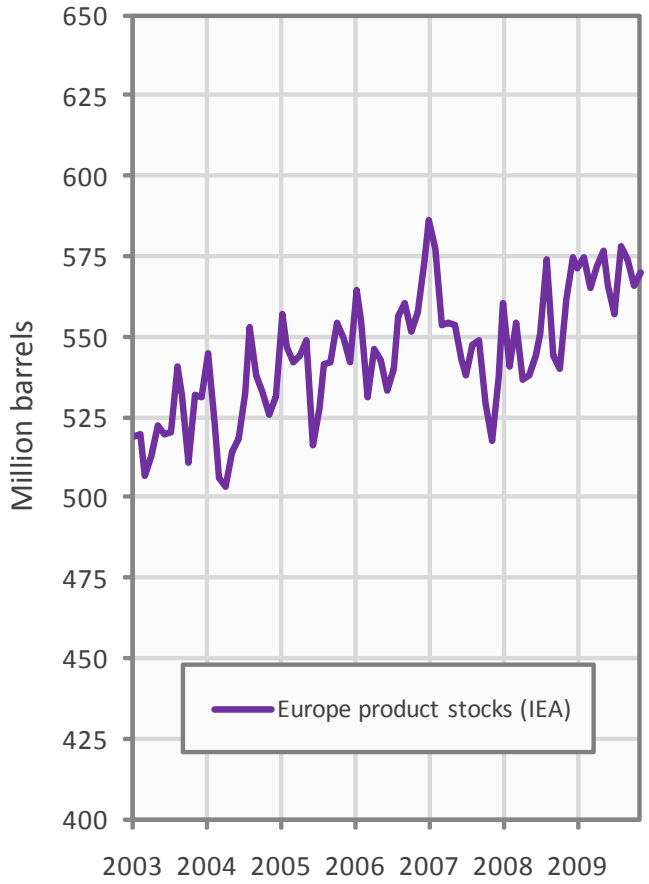
**Pacific crude oil stocks**

Industrial inventories of crude oil in OECD Pacific in November 2009 decreased to a level of 164 million from 166 million barrels in October according to the latest IEA statistics. Current OECD Pacific crude oil stocks are 6 million barrels lower than the five year average of 170 million barrels. In the December Oil Market Report of the IEA a total stock level of 171 million barrels was tabulated for October which has been revised downwards to 166 million barrels in the January edition.

**Pacific product stocks**

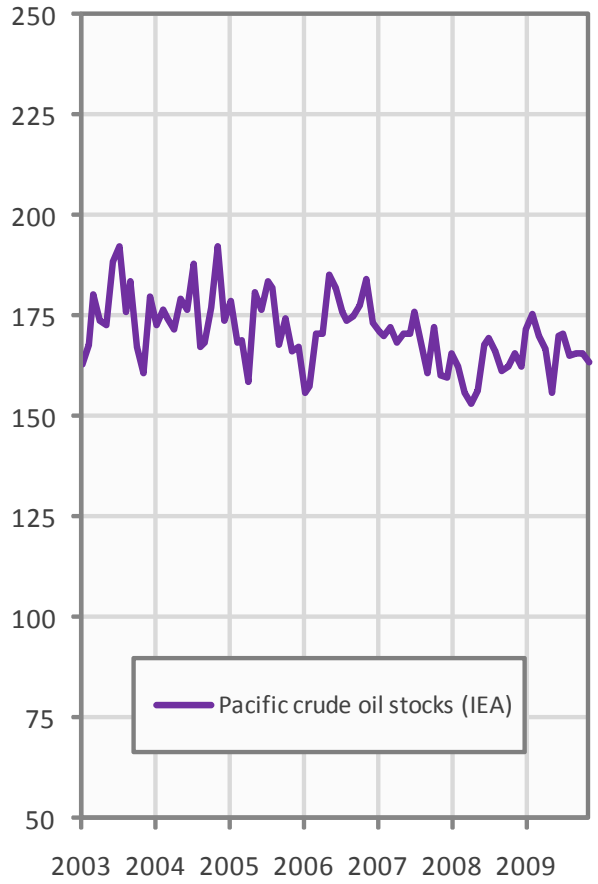
Industrial product stocks in OECD Pacific in November 2009 decreased to 177 million from 180 million barrels in Octoberaccording to the latest IEA Statistics. Current OECD Pacific product stocks are 4 million barrels lower than the five year average of 181 million barrels.

**Chart 41:** Europe Product Stocks January 2004 - October 2009



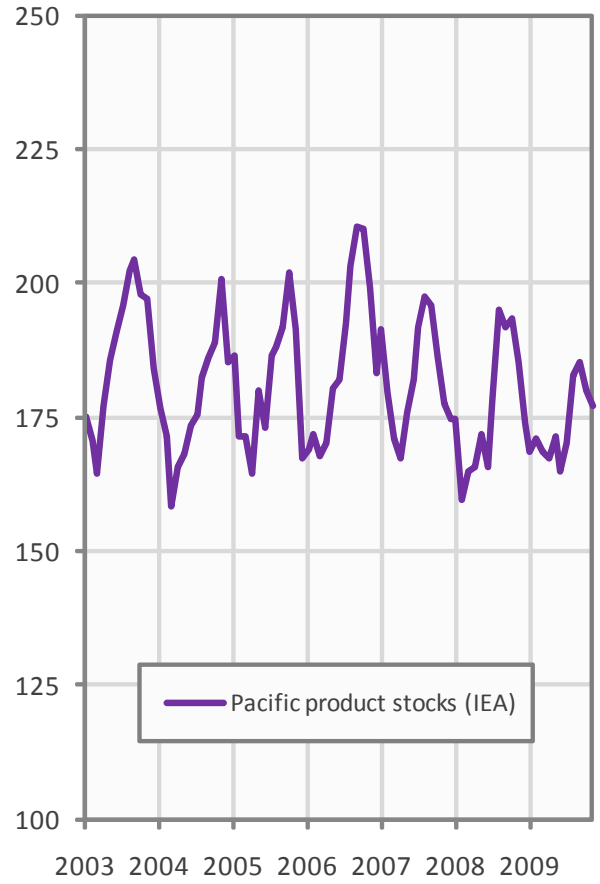

Source: International Energy Agency

**Chart 42:** Pacific Crude Oil Stocks January 2004 - October 2009




Source: International Energy Agency

**Chart 43:** Pacific Product Stocks January 2004 - October 2009



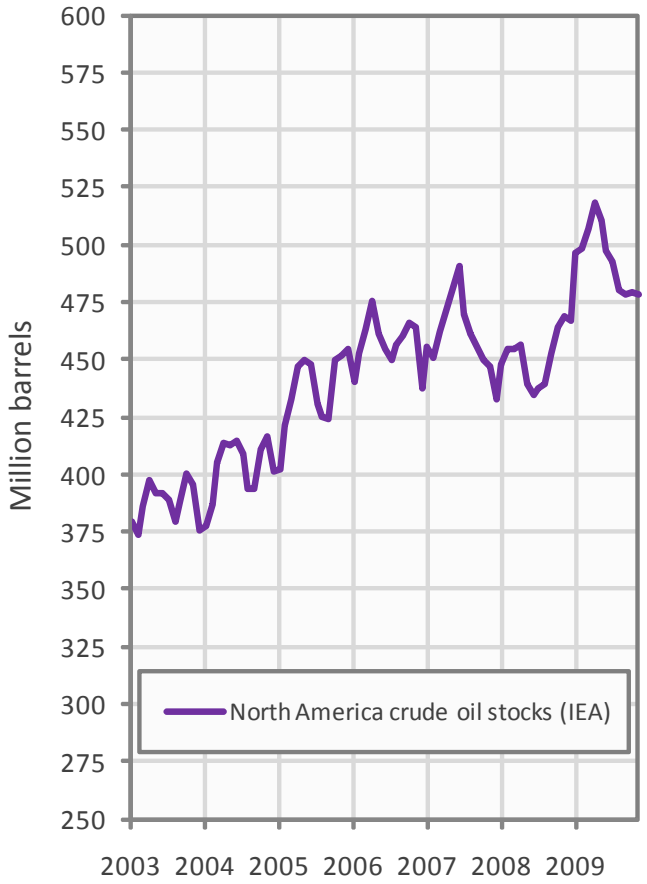

Source: International Energy Agency

**North America crude oil stocks**
Industrial inventories of crude oil in OECD North America in November 2009 remained stable at 474 million barrels from October according to the latest IEA statistics. Current OECD North America crude oil stocks are 22 million barrels higher than the five year average of 456 million barrels. In the December Oil Market Report of the IEA a total stock level of 474 million barrels was tabulated for October which has been revised upwards to 478 million barrels in the January edition.

**North America product stocks**
Industrial product stocks in North America in November 2009 decreased to 719 million from 721 million barrels in Octoberaccording to the latest IEA Statistics. Current North American product stocks are 48 million barrels higher than the five year average of 671 million barrels. In the December Oil Market Report of the IEA a total stock level of 719 million barrels was tabulated for October which has been revised upwards to 721 million barrels in the January edition.

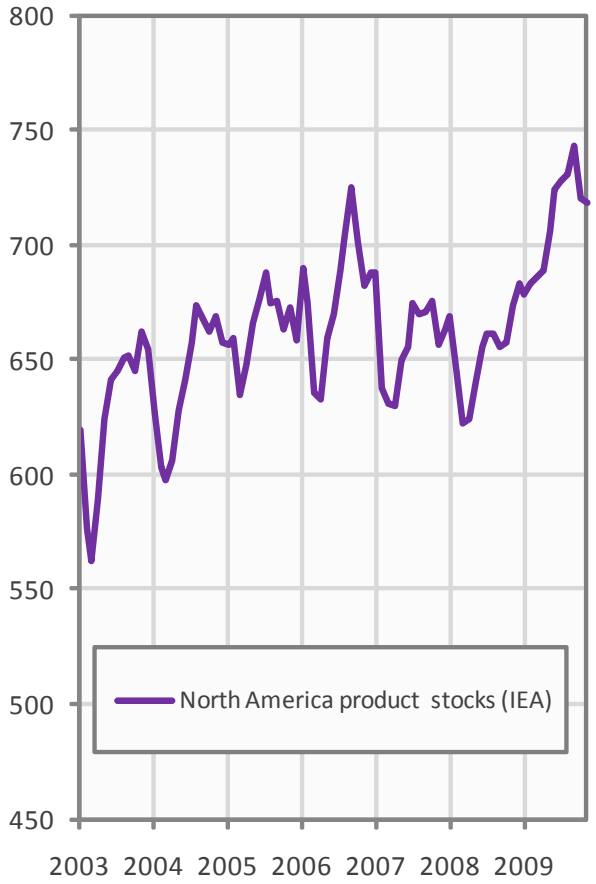
**US gasoline stocks**
Gasoline stocks in the United States in November 2009 increased to 211 million from 209 million barrels in October according to the latest EIA Statistics. Current Gasoline stocks are 3 million barrels higher than the five year average of 208 million barrels.

**Chart 44:** North America Crude Oil Stocks Jan. 2004 - Nov. 2009



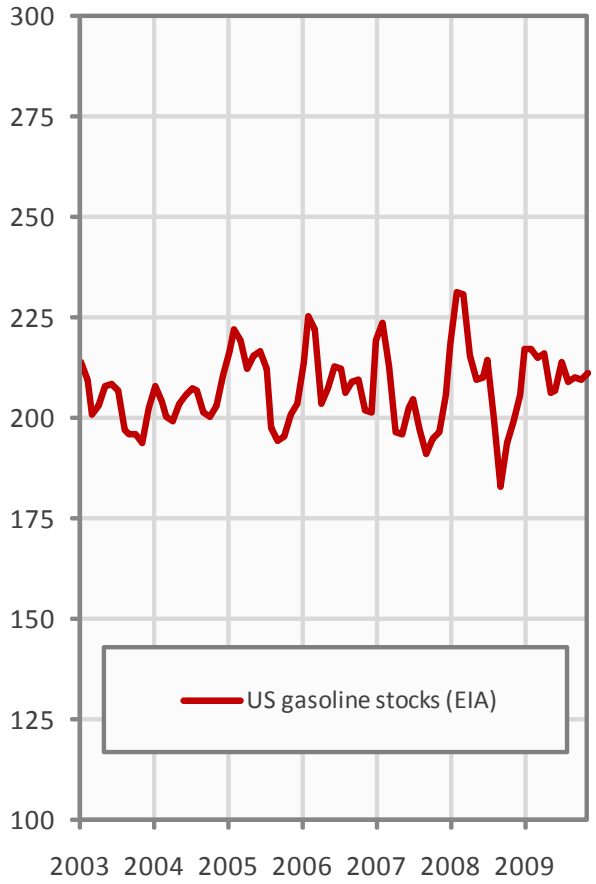

Source: International Energy Agency

**Chart 45:** North America Product Stocks Jan. 2004 - Nov. 2009




Source: International Energy Agency

**Chart 46:** United States Gasoline Stocks Jan. 2004 - Nov. 2009



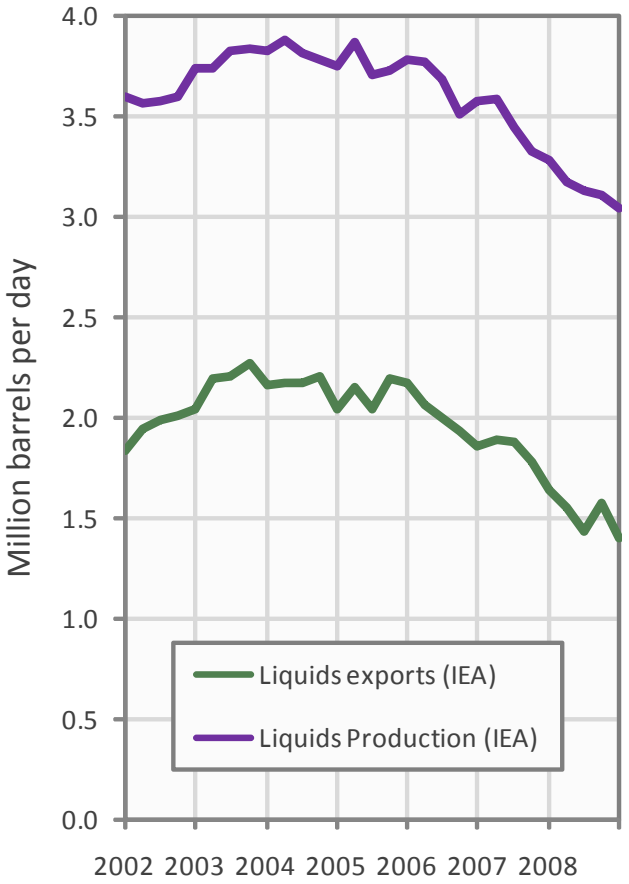

Source: Energy Information Administration

**Mexico oil exports**
Oil exports from Mexico decreased by 172,000 b/d from 4th qrt. 2008 to 1st qrt. 2009 to a level of 1.40 million b/d. Average oil export from Mexico in 2008 was 1.55 million b/d, versus 1.85 and 2.04 million b/d in respectively 2007 and 2006.

**United Kingdom oil exports**
Oil exports from the United Kingdom decreased by 73,000 b/d 4th qrt. 2008 to 1st qrt. 2009 to a level of 876,000 b/d. Average oil export from the United Kingdom in 2008 was 957,000 b/d, versus 1.02 and 1.00 million b/d in respectively 2007 and 2006. Since 2004 the United Kingdom became a net importer of oil. Net imports were 186,000 b'/d in 1st qrt. 2009.

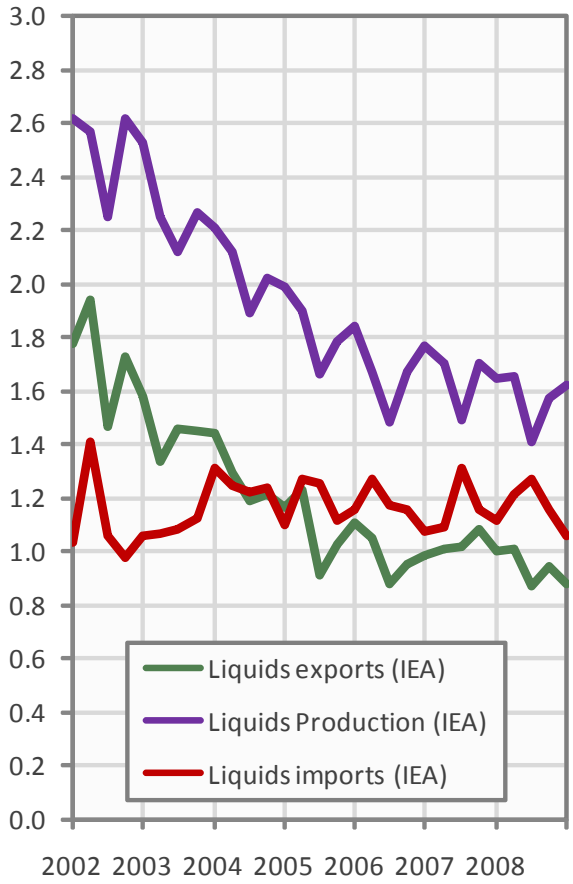
**Norway oil exports**
Oil exports from Norway increased by 37,000 b/d from 4th qrt. 2008 to 1st qrt. 2009 to a level of 1.91 million b/d. Average oil export from Norway in 2008 was 1.67 million b/d, versus 1.97 and 2.17 million b/d in respectively 2007 and 2006.

**Chart 47:** Mexico oil exports 1st qrt. 2002 - 1st qrt. 2009



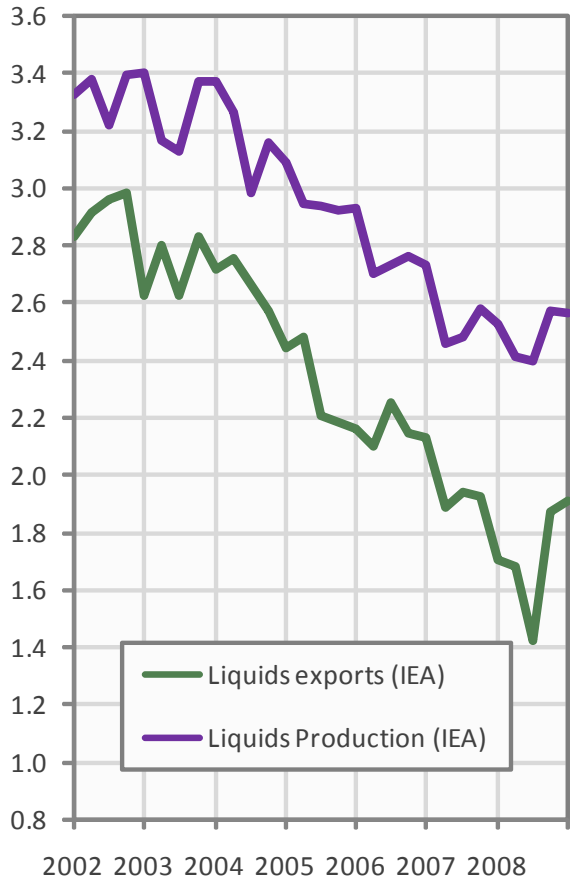

Source: International Energy Agency

**Chart 48:** UK oil exports 1st qrt. 2002 - 1st qrt. 2009




Source: International Energy Agency

**Chart 49:** Norway oil exports 1st qrt. 2002 - 1st qrt. 2009



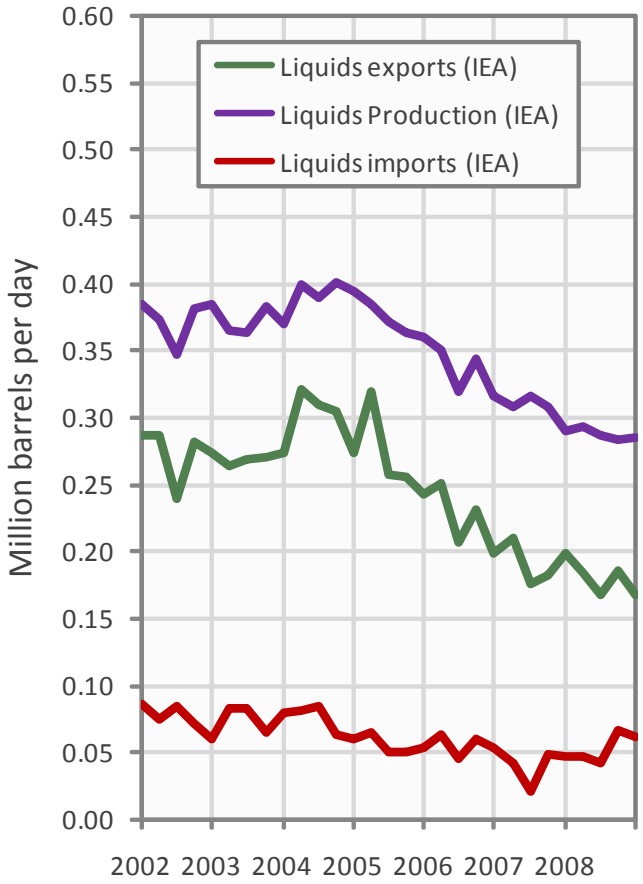

Source: International Energy Agency

**Denmark oil exports**
Oil exports from Denmark decreased by 17,000 b/d from 4th qrt. 2008 to 1st qrt. 2009 to a level of 167,000 b/d. Average oil export from Denmark in 2008 was 184,000 b/d, versus 191,000 and 233,000 b/d in respectively 2007 and 2006.

**Australia oil exports**
Oil exports from Australia decreased by 47,000 b/d from 4th qrt. 2008 to 1st qrt. 2009 to a level of 260,000 b/d. Average oil export from Australia in 2008 was 270,000 b/d, versus 252,000 b/d and 217,000 b/d in respectively 2007 and 2006.

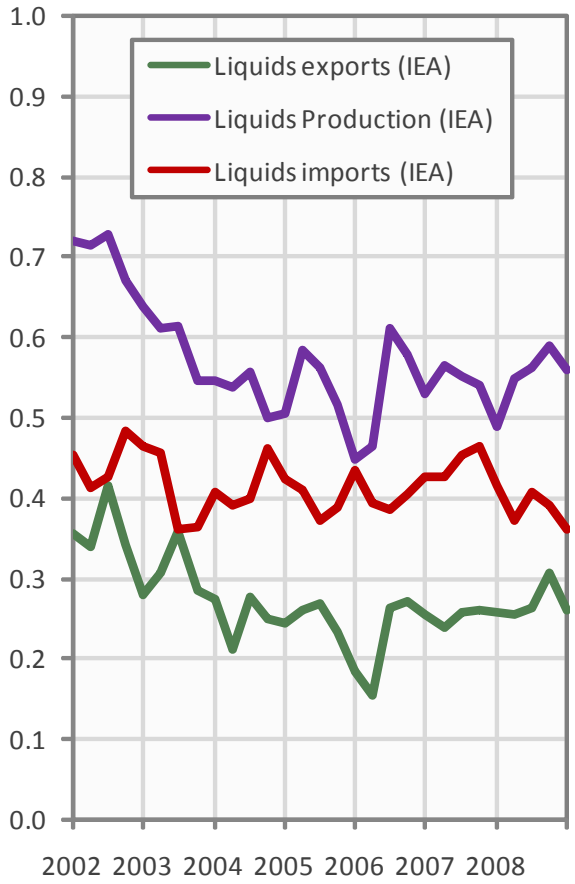
**Japan oil imports**
Oil imports in Japan decreased by 64,000 b/d from 4th qrt. 2008 to 1st qrt. 2009 to a level of 3.87 million b/d. Average oil import in Japan in 2008 was 4.12 million b/d, versus 4.09 and 4.15 million b/d in respectively 2007 and 2006.

**Chart 50:** Denmark oil exports 1st qrt. 2002 - 1st qrt. 2009



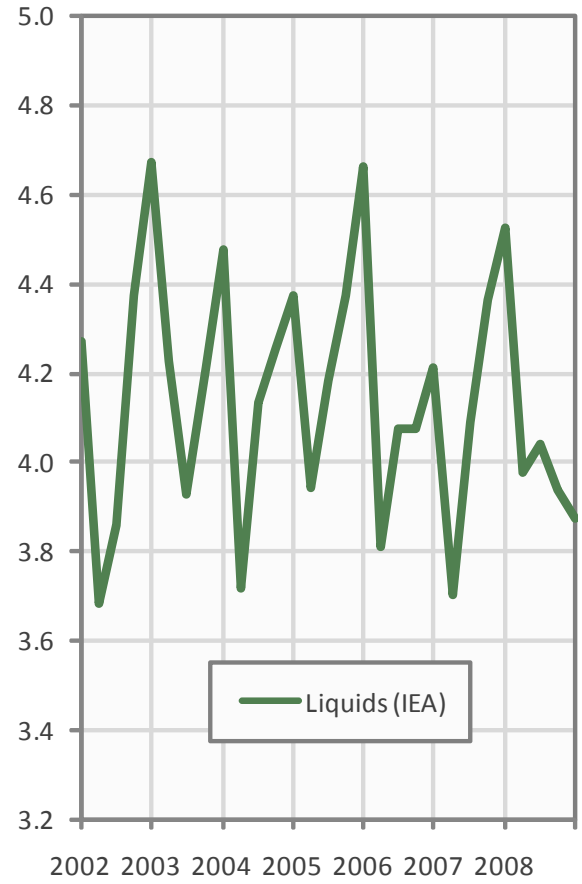

Source: International Energy Agency

**Chart 51:** Australia oil exports 1st qrt. 2002 - 1st qrt. 2009




Source: International Energy Agency

**Chart 52:** Japan Oil Imports 1st qrt. 2002 - 1st qrt. 2009



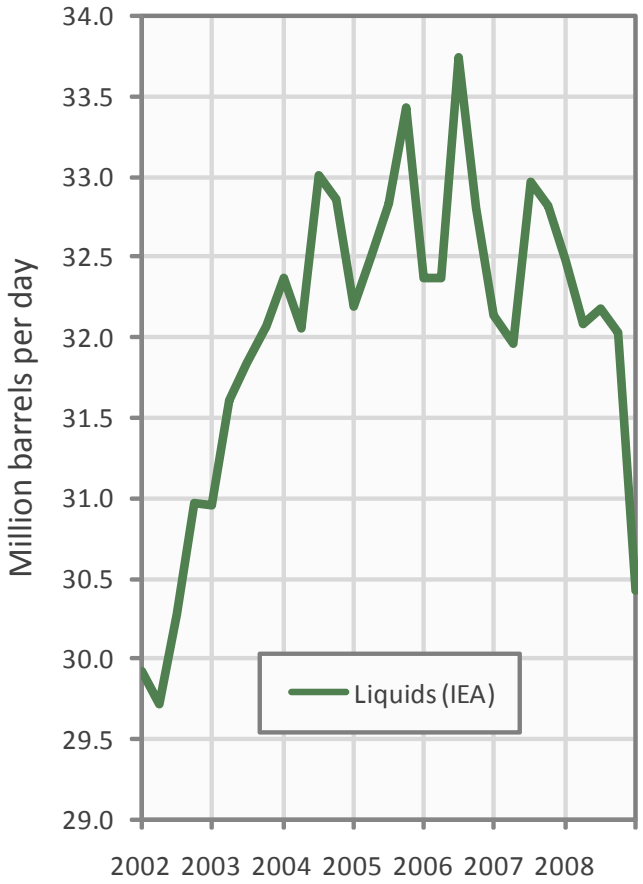

Source: International Energy Agency

**OECD oil imports**
Oil imports in the group of OECD countries decreased by 1.60 million b/d from 4th qrt. 2008 to 1st qrt. 2009 to a level of 30.43 million b/d. Average oil import in OECD countries in 2008 was 32.19 million b/d, versus 32.47 and 32.7 million b/d in respectively 2007 and 2006.

**United States oil imports**
Oil imports in the United States decreased by 661,000 b/d from 4th qrt. 2008 to 1st qrt. 2009 to a level of 10.84 million b/d. Average oil import in the United States in 2008 was 11.43 million b/d, versus 11.55 and 11.77 million b/d in respectively 2007 and 2006.

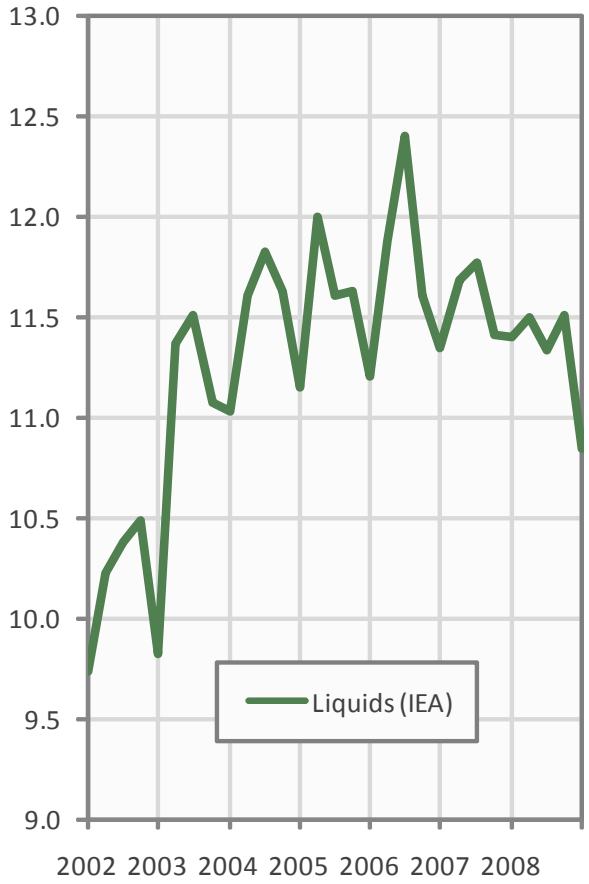
**OECD Europe oil imports**
Oil imports from OECD Europe decreased by 854,000 b/d from 4th qrt. 2008 to 1st qrt. 2009 to a level of 11.98 million b/d. Average oil import in OECD Europe in 2008 was 12.98 million b/d, versus 13.05 and 13.18 million b/d in respectively 2007 and 2006.

**Chart 53:** OECD Oil Imports 1st qrt. 2002 - 1st qrt. 2009



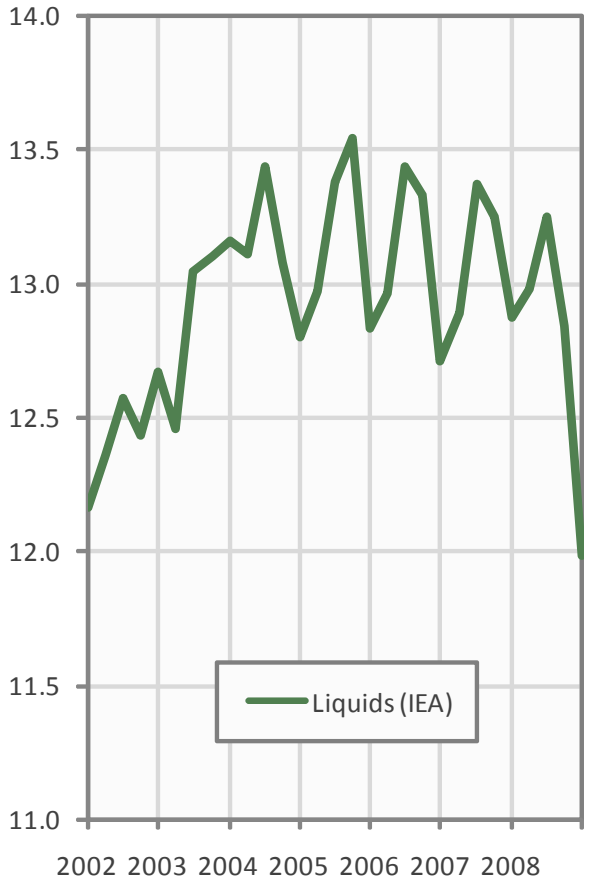

Source: International Energy Agency

**Chart 54:** US Oil Imports 1st qrt. 2002 - 1st qrt. 2009




Source: International Energy Agency

**Chart 55:** OECD Europe Oil Imports 1st qrt. 2002 - 1st qrt. 2009




Source: International Energy Agency

**IEA OPEC spare capacity**

According to the International Energy Agency total effective spare capacity (excluding Iraq, Venezuela and Nigeria) increased from November to December 2009 by 2,000 b/d to a level of 5.37 million b/d. Of total effective spare capacity an additional 3.55 million b/d is estimated to be producible by Saudi Arabia within 90 days, the United Arab Emirates 0.42 million b/d, Angola 0.24 million b/d, Iran 0.28 million b/d, Libya 0.23 million b/d, Qatar 0.10 million b/d, and the other remaining countries 0.55 million b/d.

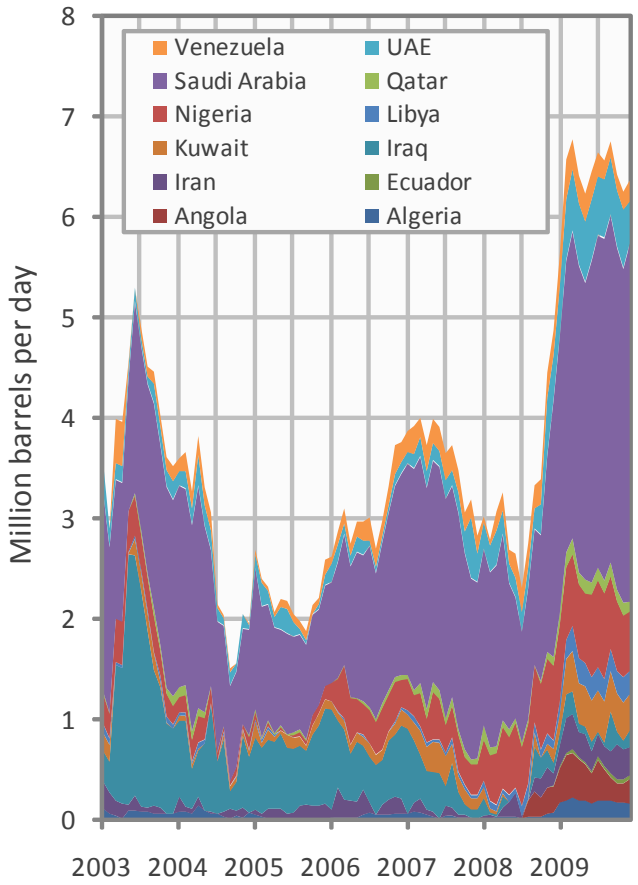
**EIA OPEC spare capacity**

Total OPEC spare production capacity in December 2009 increased by 10,000 b/d to a level of 5.03 million b/d from 4.93 million b/d in November according to the Energy Information Administration. Spare capacity figures from May 2009 to November 2009 significantly revised upwards in the latest Oil Market Report. Mainly due to an adjustment in Saudi Arabian spare capacity from 2.8 to 3.7 million b/d for November 2009.

**Saudi Arabia spare capacity**

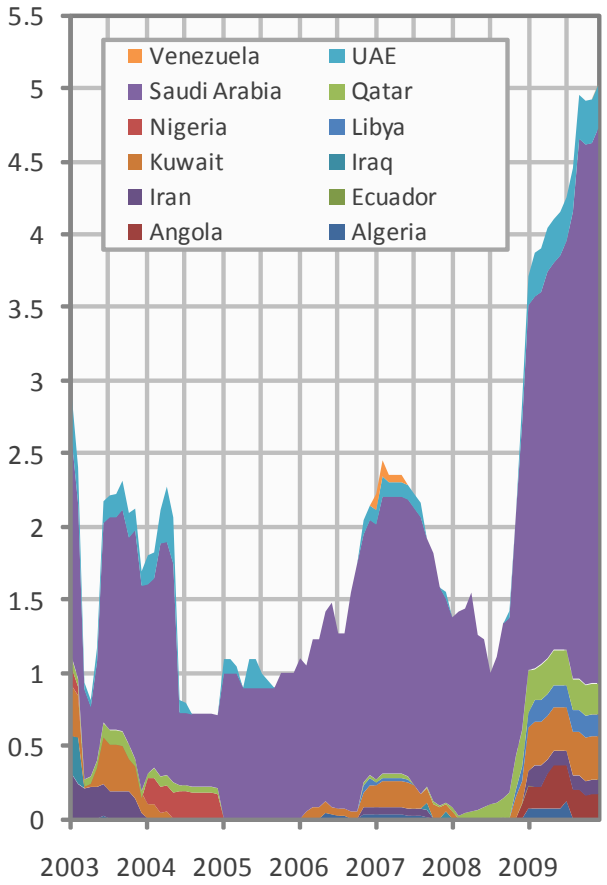
Spare capacity in Saudi Arabia increased to 3.8 million b/d in December from a level of 3.70 million b/d in November 2009 according to the Energy Information Administration. Statistics from the International Energy Agency show an increase in Saudi spare capacity to 3.55 million from 3.32 million b/d from November to December 2009.

**Chart 56:** IEA OPEC Spare Capacity January 2003 - Dec. 2009



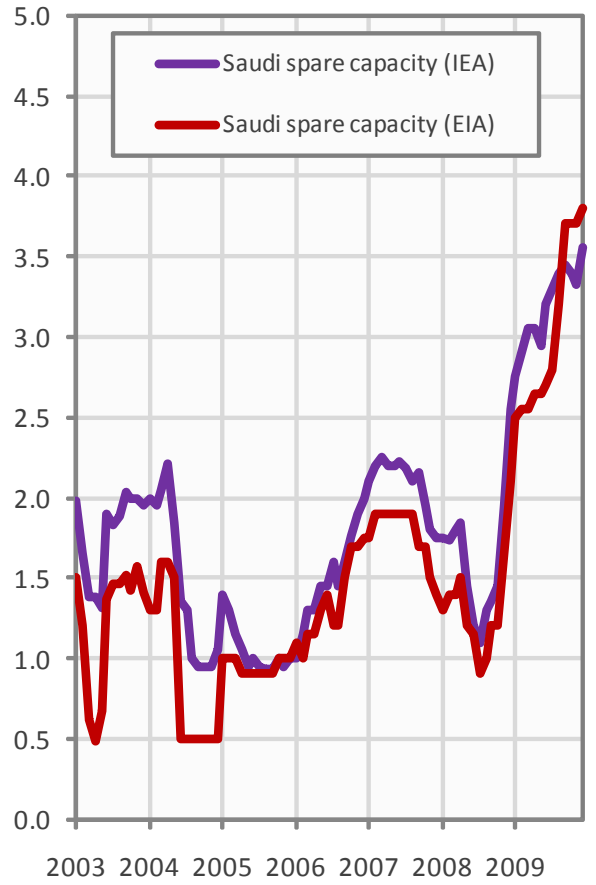

Source: International Energy Agency

**Chart 57:** EIA OPEC Spare Capacity January 2003 - Dec. 2009



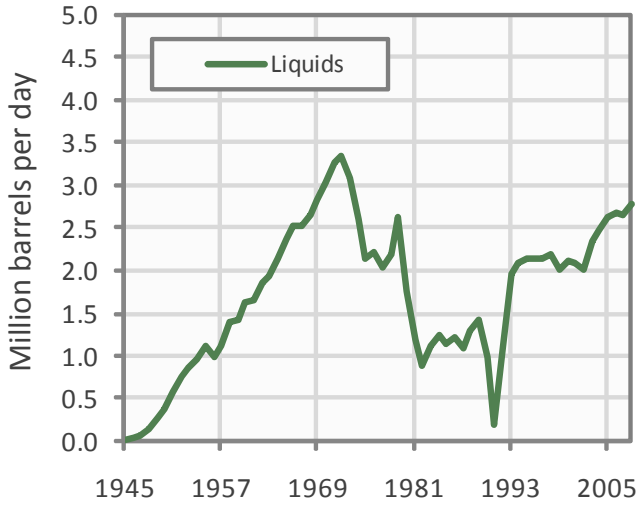

Source: Energy Information Administration

**Chart 58:** Saudi Arabia Spare Capacity Jan. 2003 - Dec. 2009



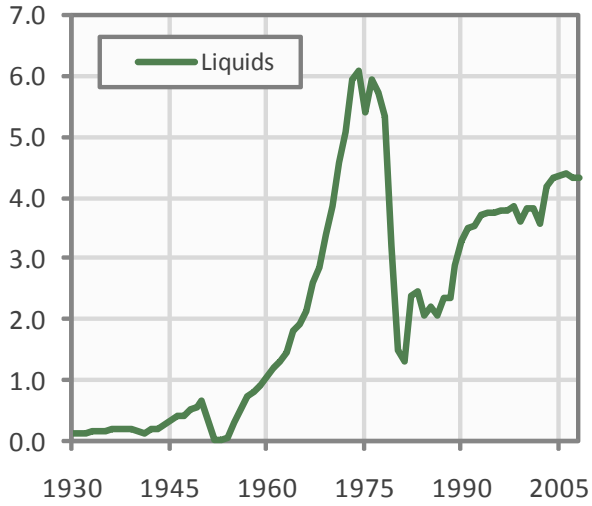

Source: International Energy Agency & Energy Information Administration

**Chart 59:** Kuwait Liquids Production 1945 - 2008



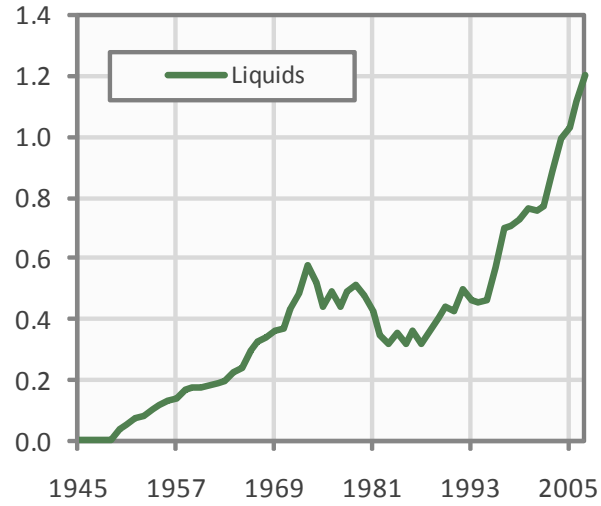

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 60:** Iran Liquids Production 1930 - 2008



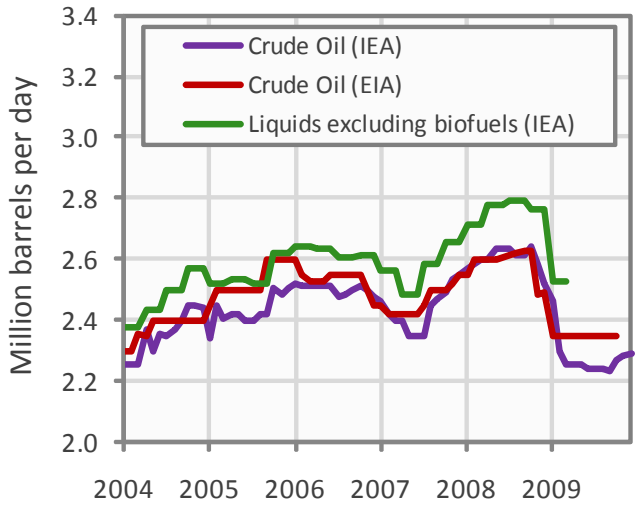

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 61:** Qatar Liquids Production 1945 - 2008



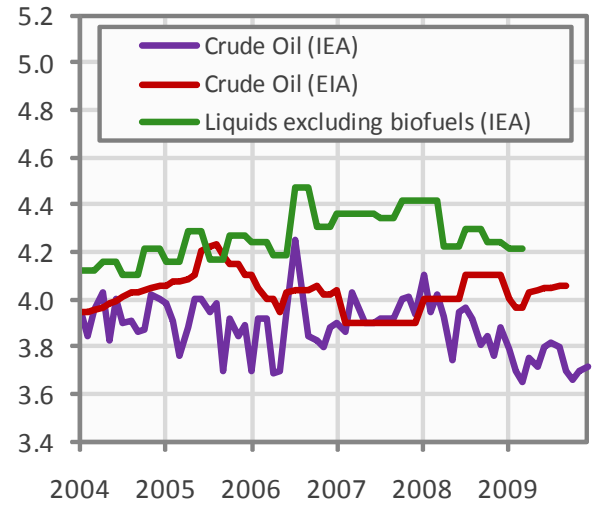

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 62:** Kuwait Oil Production January 2004 - December 2009



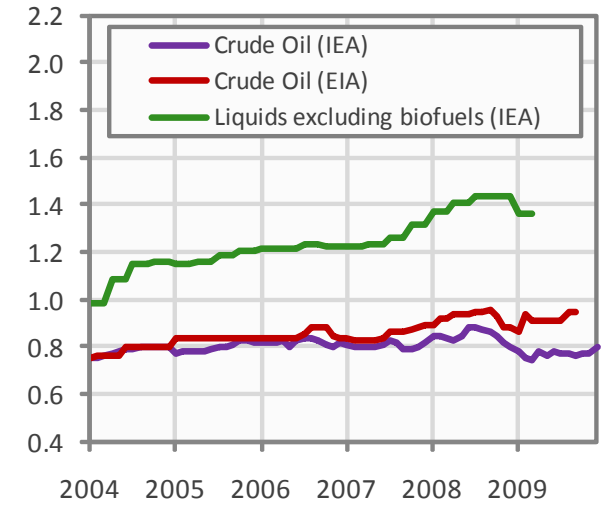

Source: International Energy Agency & Energy Information Administration

**Chart 63:** Iran Oil Production January 2004 - December 2009



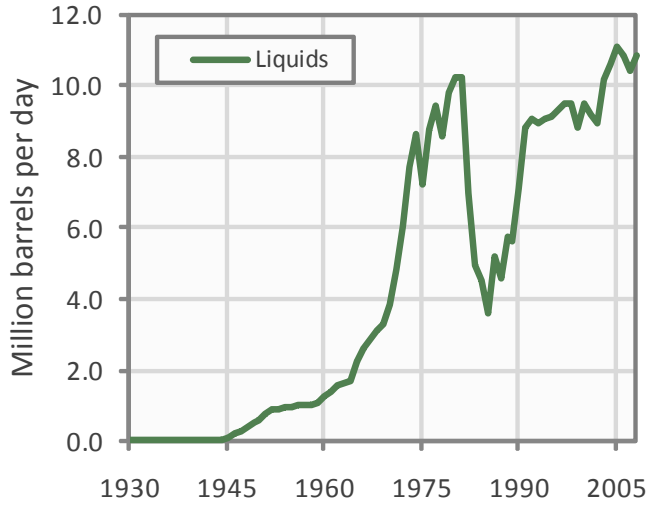

Source: International Energy Agency & Energy Information Administration

**Chart 64:** Qatar Oil Production January 2004 - December 2009



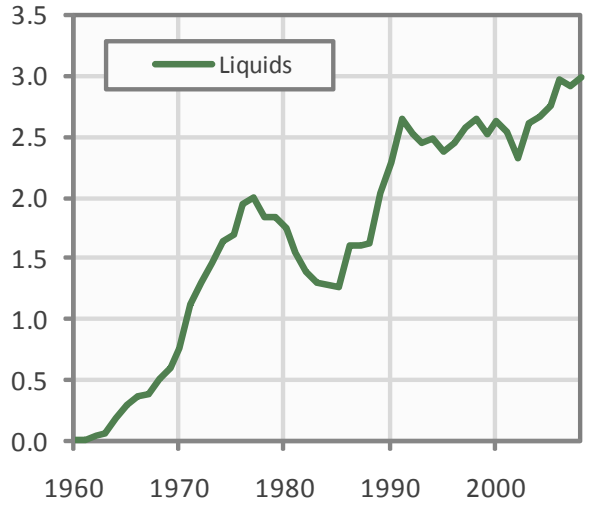

Source: International Energy Agency & Energy Information Administration

**Chart 65:** Saudi Arabia Liquids Production 1935 - 2008



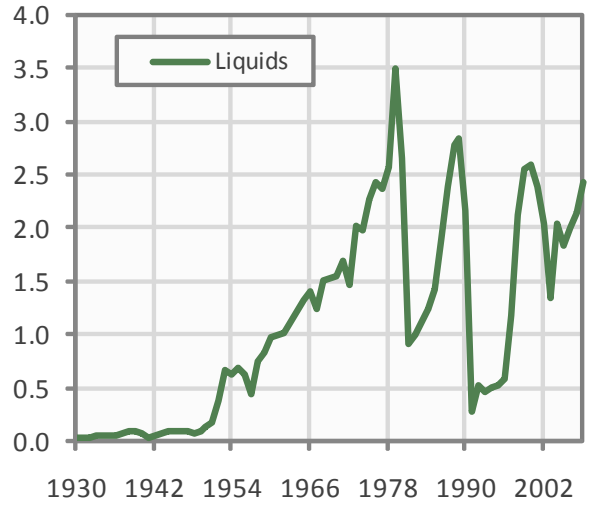

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 66:** UAE Liquids Production 1960 - 2008



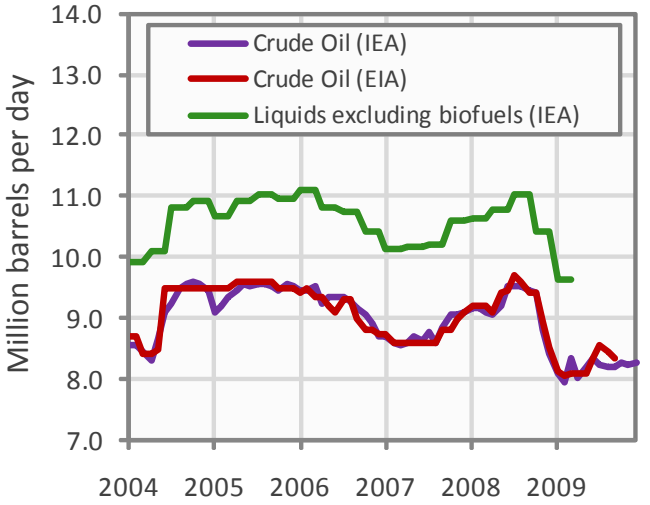

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 67:** Iraq Liquids Production 1930 - 2008



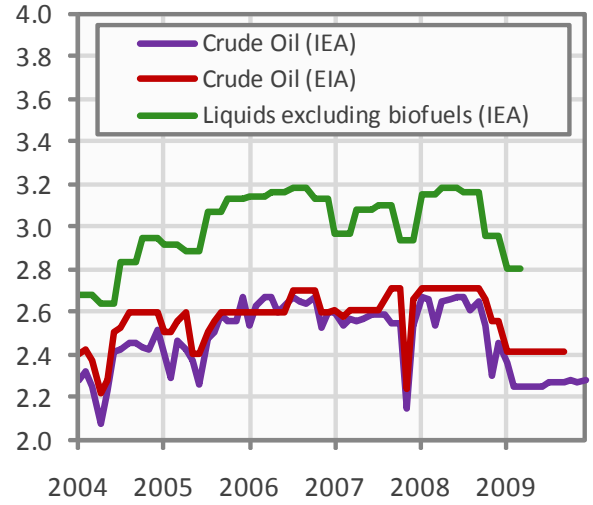

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 68:** Saudi Arabia Oil Production January 2004 - Dec. 2009



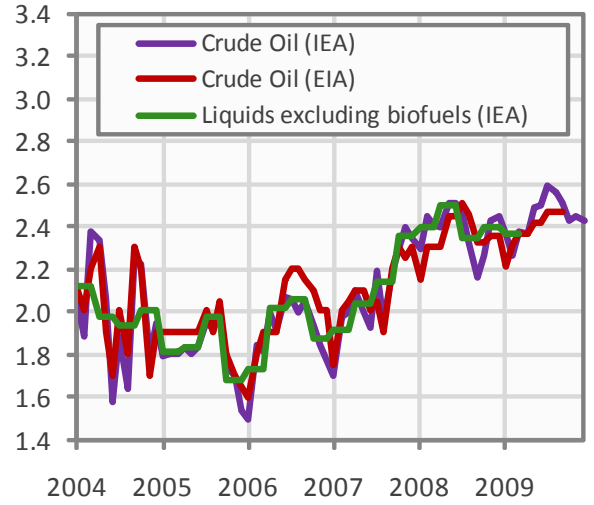

Source: International Energy Agency & Energy Information Administration

**Chart 69:** UAE Oil Production January 2004 - December 2009



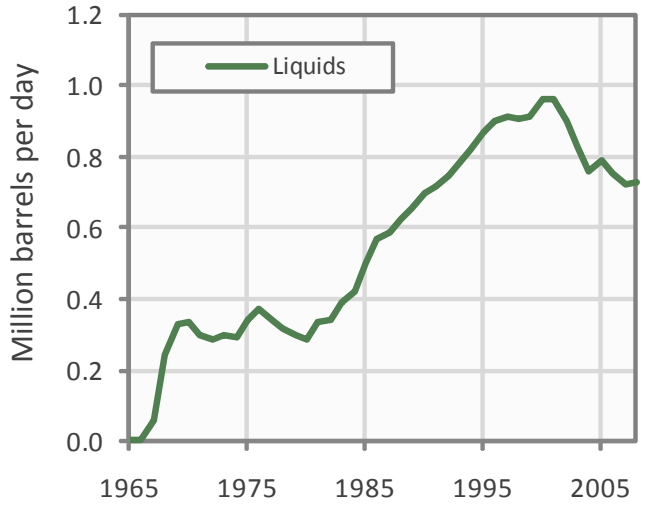

Source: International Energy Agency & Energy Information Administration

**Chart 70:** Iraq Oil Production January 2004 - December 2009



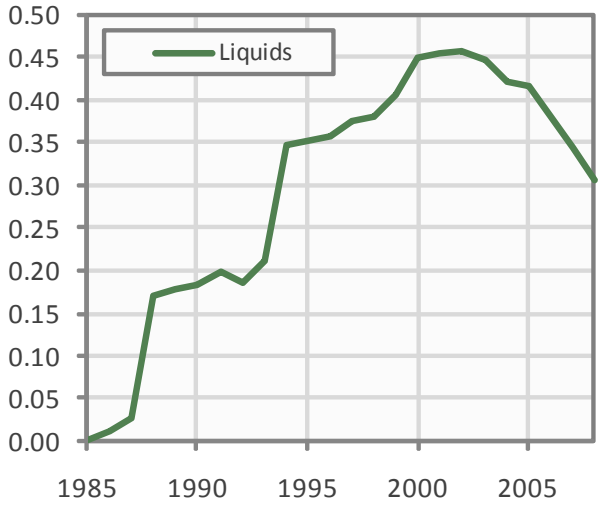

Source: International Energy Agency & Energy Information Administration

**Chart 71:** Oman Liquids Production 1965 - 2008



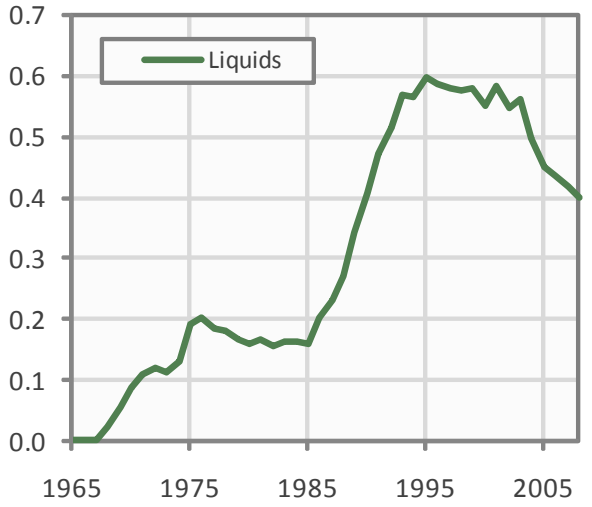

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 72:** Yemen Liquids Production 1985 - 2008



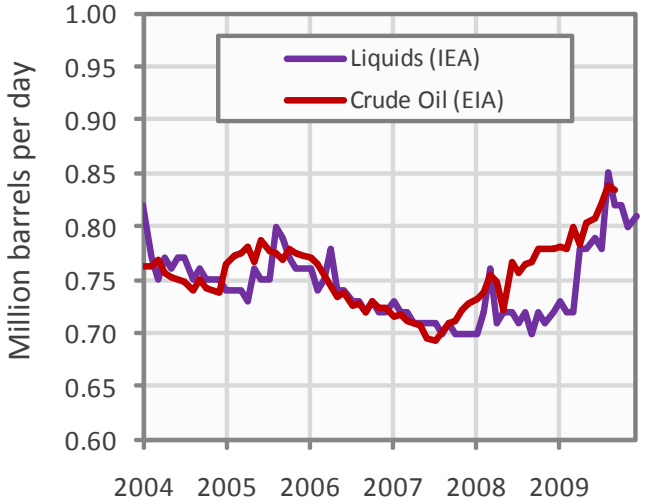

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 73:** Syria Liquids Production 1930 - 2008



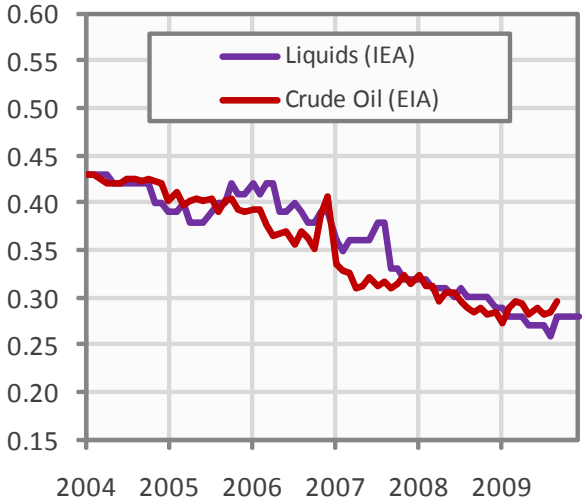

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 74:** Oman Oil Production January 2004 - November 2009



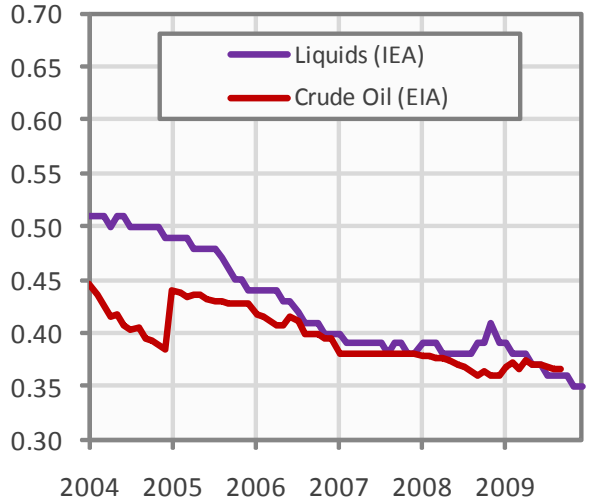

Source: International Energy Agency & Energy Information Administration

**Chart 75:** Yemen Oil Production January 2004 - November 2009



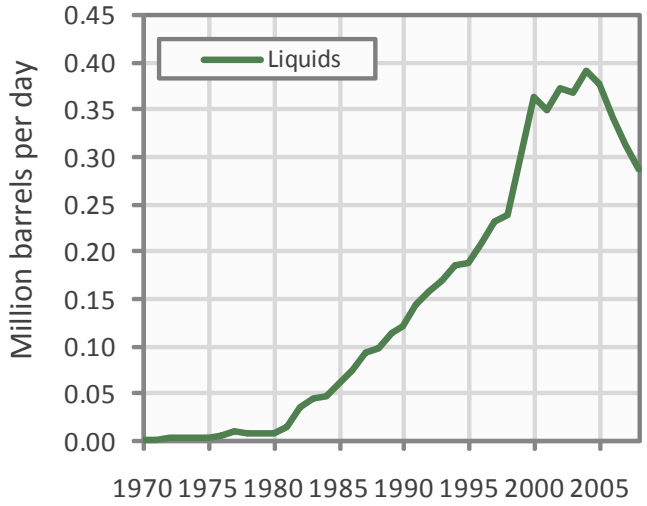

Source: International Energy Agency & Energy Information Administration

**Chart 76:** Syria Oil Production January 2004 - November 2009



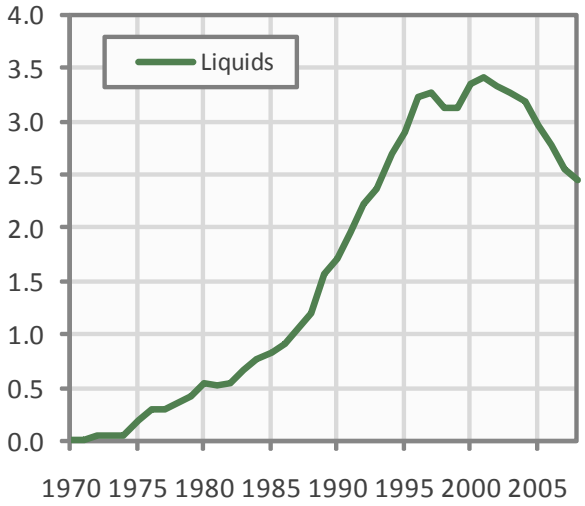

Source: International Energy Agency & Energy Information Administration

**Chart 77:** Denmark Liquids Production 1970 - 2008



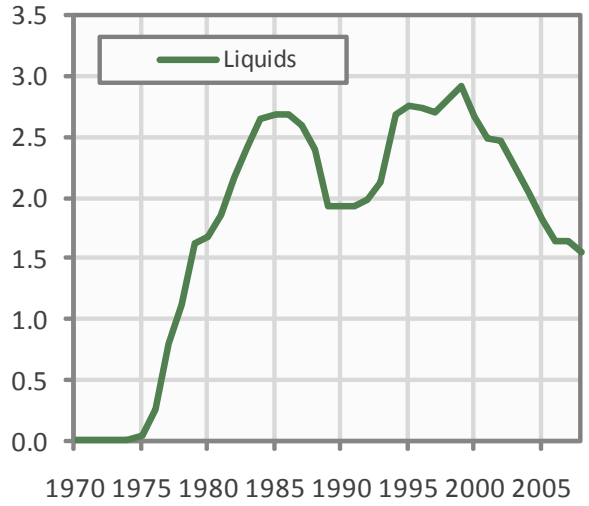

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 78:** Norway Liquids Production 1970 - 2008



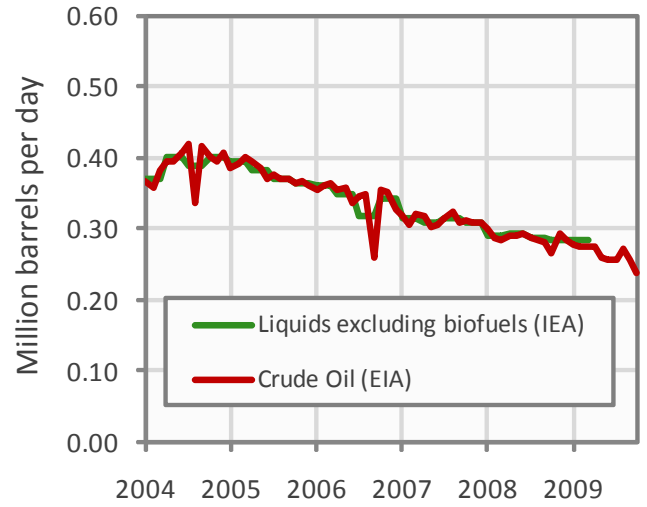

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 79:** UK Liquids Production 1970 - 2008



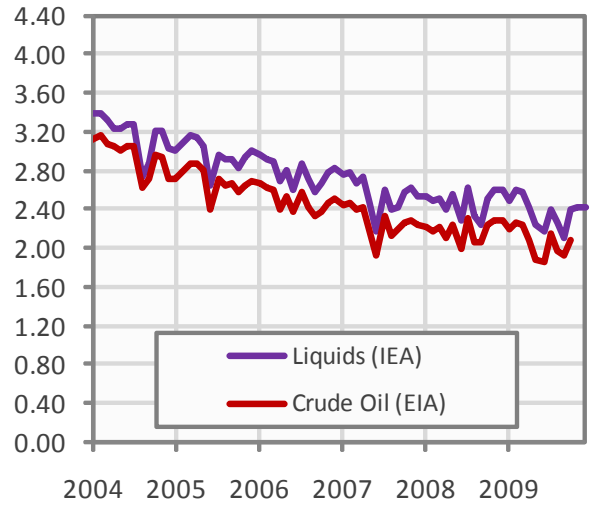

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 80:** Denmark oil production January 2004 - October 2009



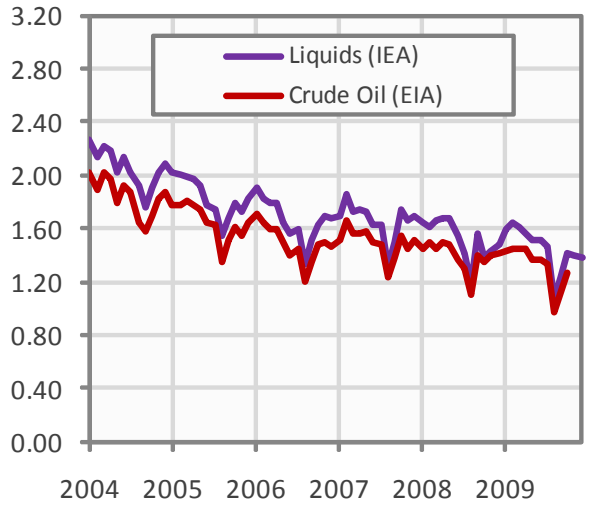

Source: International Energy Agency & Energy Information Administration

**Chart 81:** Norway oil production January 2004 - December 2009



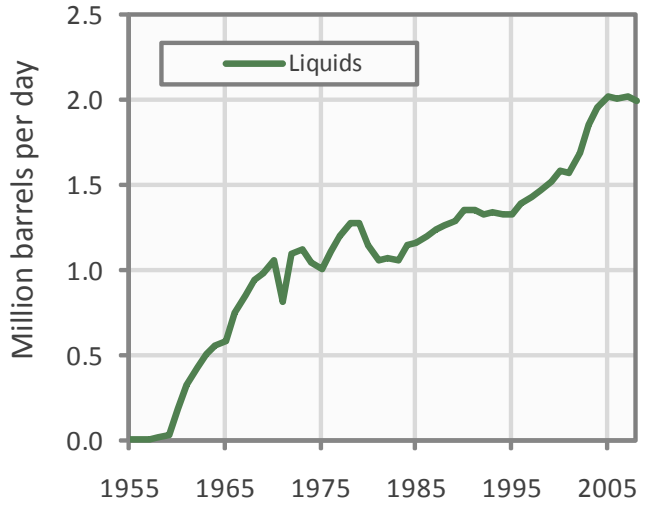

Source: International Energy Agency & Energy Information Administration

**Chart 82:** UK oil production January 2004 - December 2009



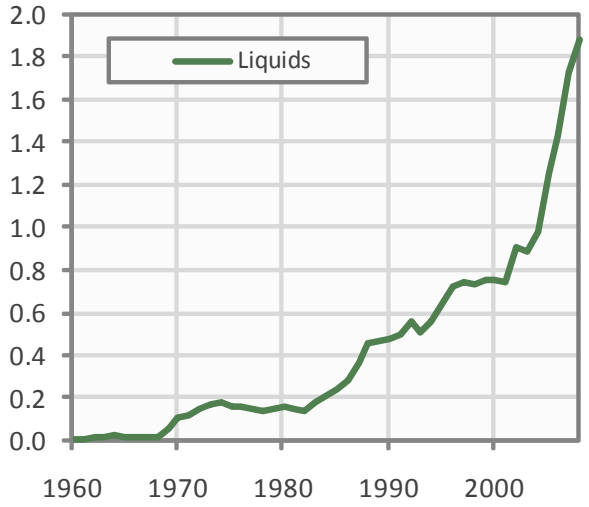

Source: International Energy Agency & Energy Information Administration

**Chart 83:** Algeria Liquids Production 1955 - 2008



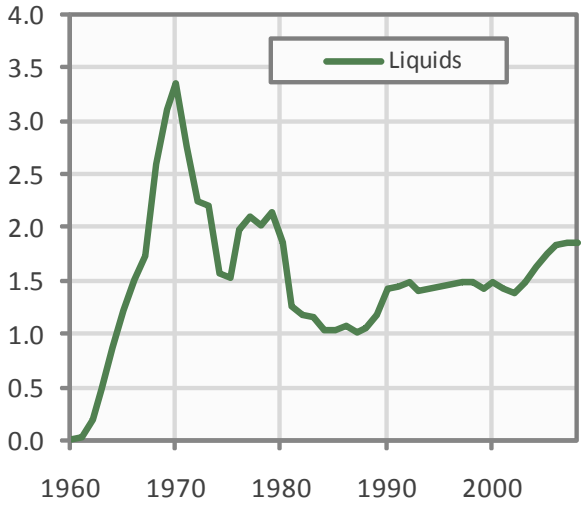

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 84:** Angola Liquids Production 1960 - 2008



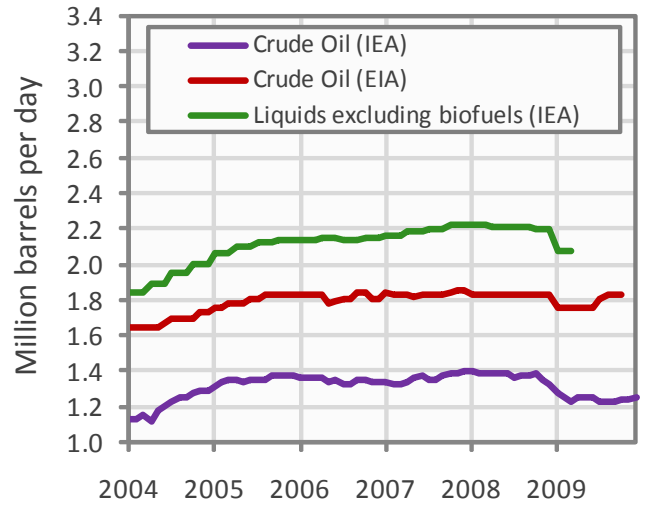

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 85:** Libya Liquids Production 1970 - 2008



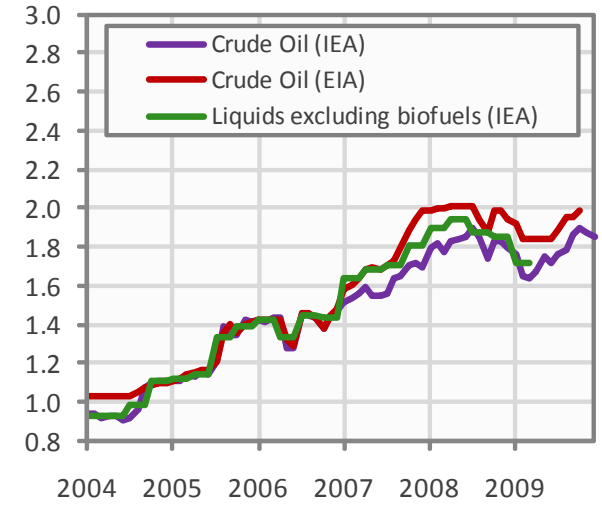

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 86:** Algeria Oil Production January 2004 - November 2009



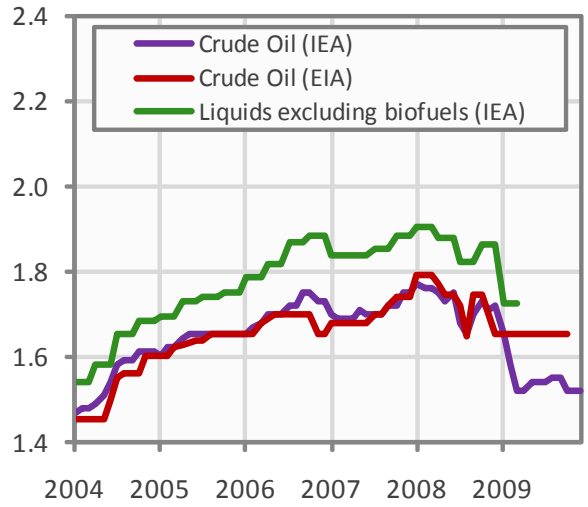

Source: International Energy Agency & Energy Information Administration

**Chart 87:** Angola Oil Production January 2004 - November 2009



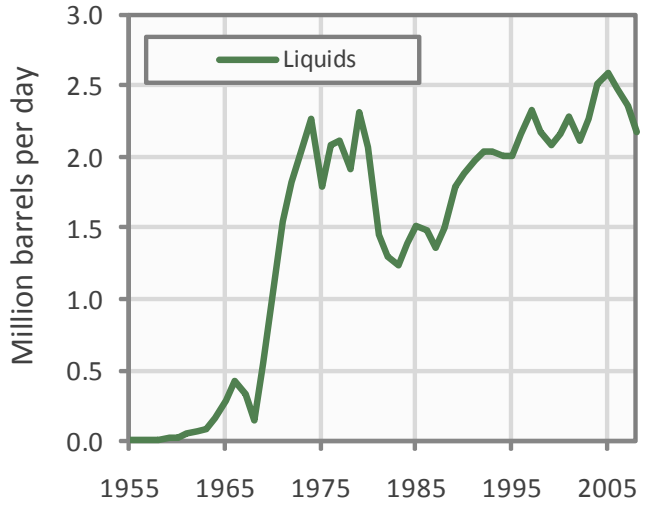

Source: International Energy Agency & Energy Information Administration

**Chart 88:** Libya Oil Production January 2004 - November 2009



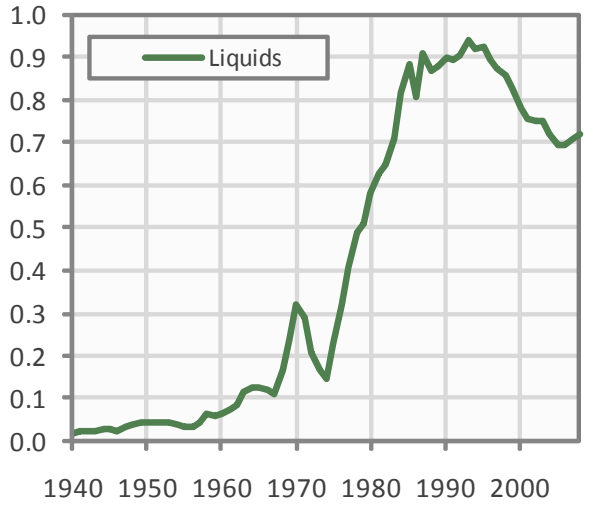

Source: International Energy Agency & Energy Information Administration

**Chart 89:** Nigeria Liquids Production 1955 - 2008



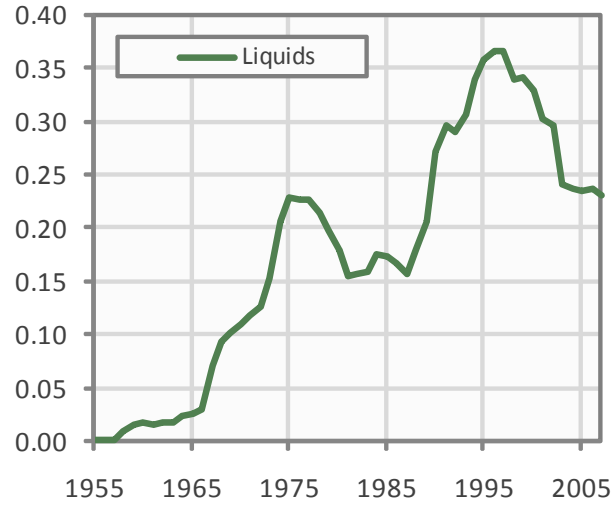

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 90:** Egypt Liquids Production 1940 - 2008



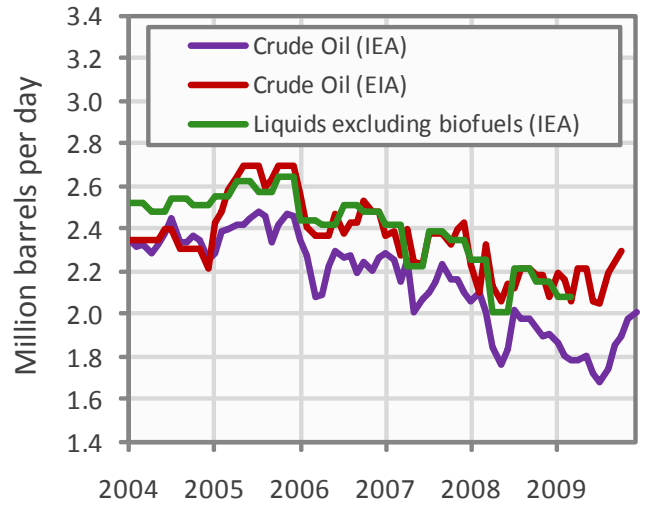

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 91:** Gabon Liquids Production 1955 - 2008



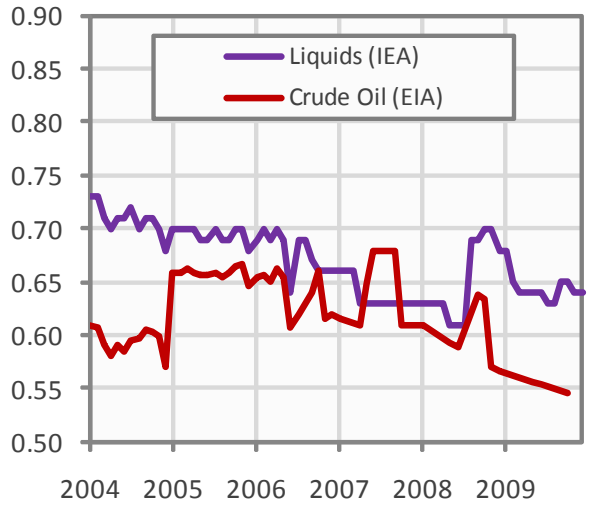

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 92:** Nigeria Oil Production January 2004 - December 2009



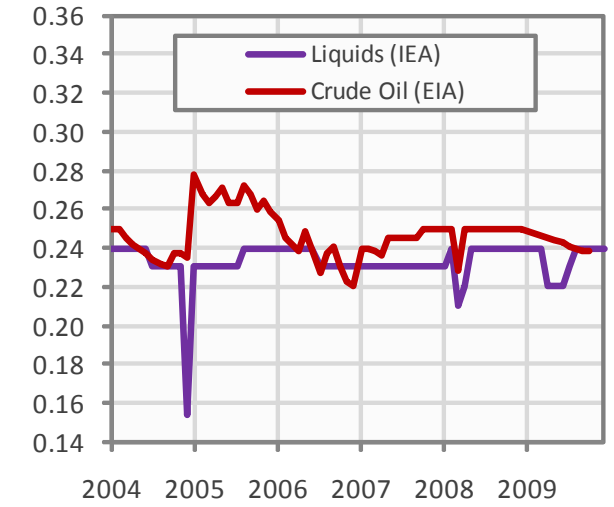

Source: International Energy Agency & Energy Information Administration

**Chart 93:** Egypt Oil Production January 2004 - December 2009



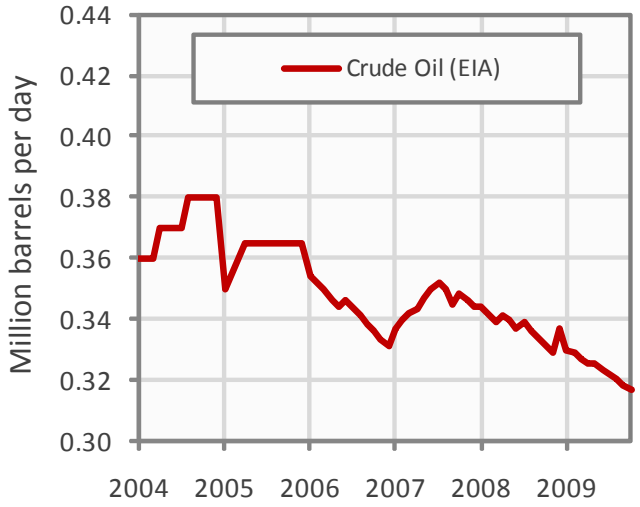

Source: International Energy Agency & Energy Information Administration

**Chart 94:** Gabon Oil Production January 2004 - December 2009



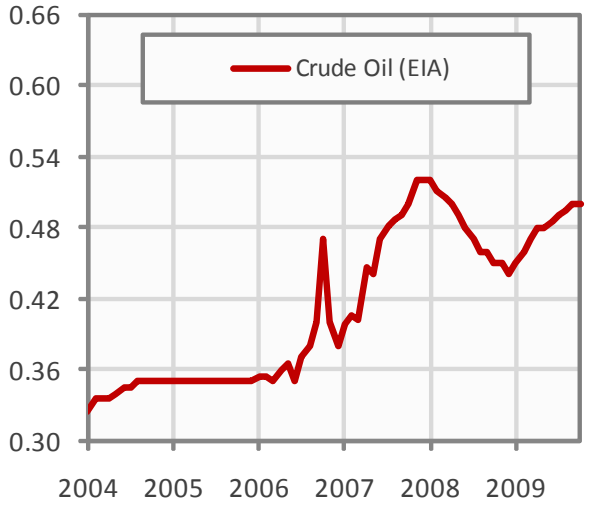

Source: International Energy Agency & Energy Information Administration

**Chart 95:** Eq. Guinea Oil Production January 2004 - Oct. 2009



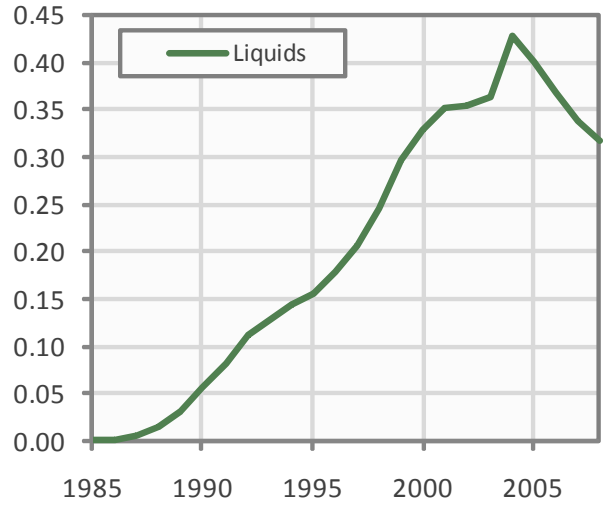

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 96:** Sudan Liquids Production January 2002 - Oct. 2009



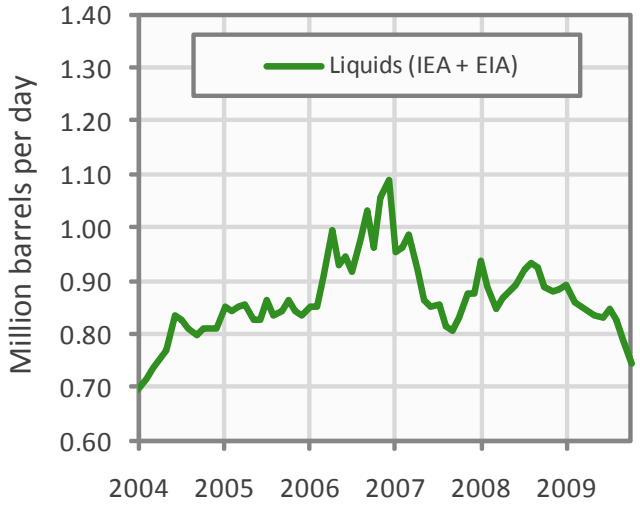

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 97:** Vietnam Liquids Production 1985 - 2008



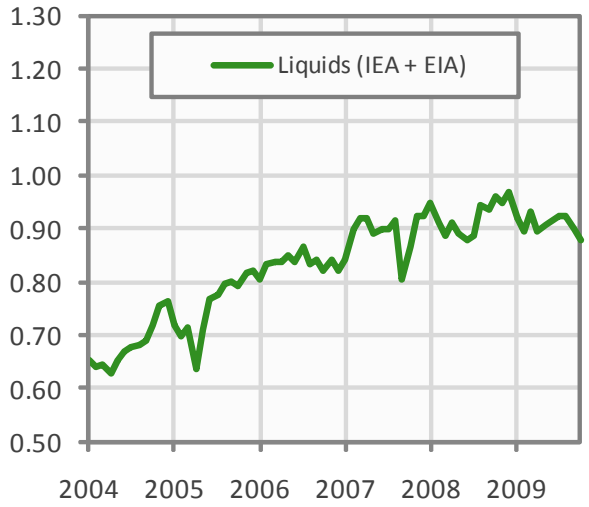

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 98:** Other Africa Oil Production Jan. 2002 - October 2009



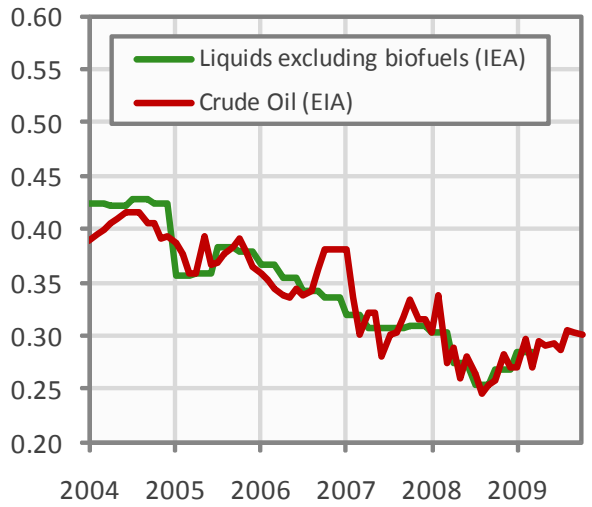

Source: International Energy Agency & Energy Information Administration

**Chart 99:** Other Asia liquids Production Jan. 2002 - October 2009



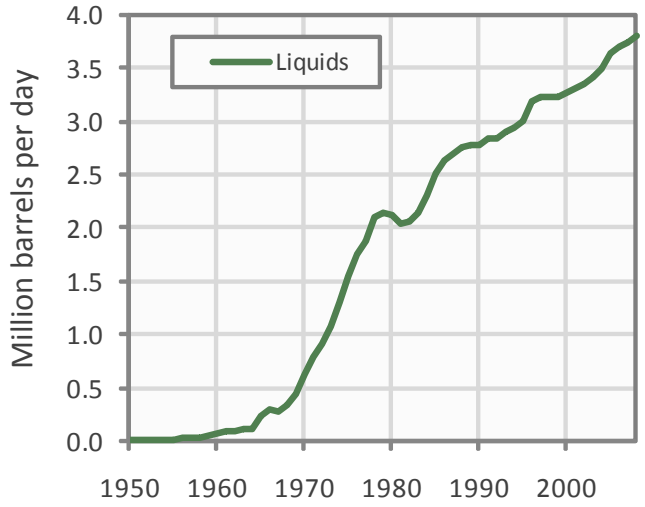

Source: International Energy Agency & Energy Information Administration

**Chart 100:** Vietnam Oil Production January 2004 - October 2009



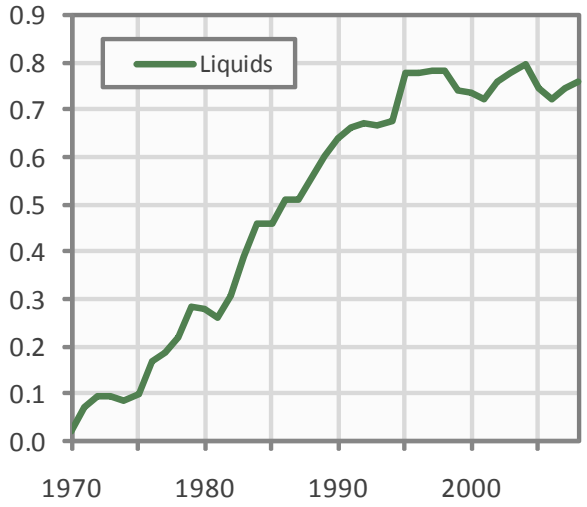

Source: International Energy Agency & Energy Information Administration

**Chart 101:** China Liquids Production 1950 - 2008



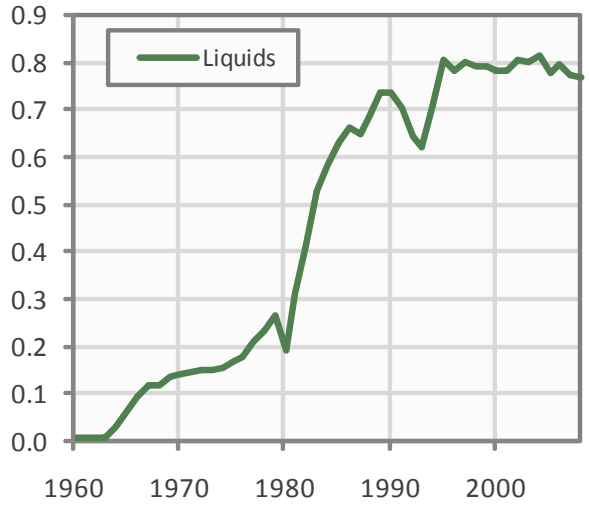

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 102:** India Liquids Production 1960 - 2008



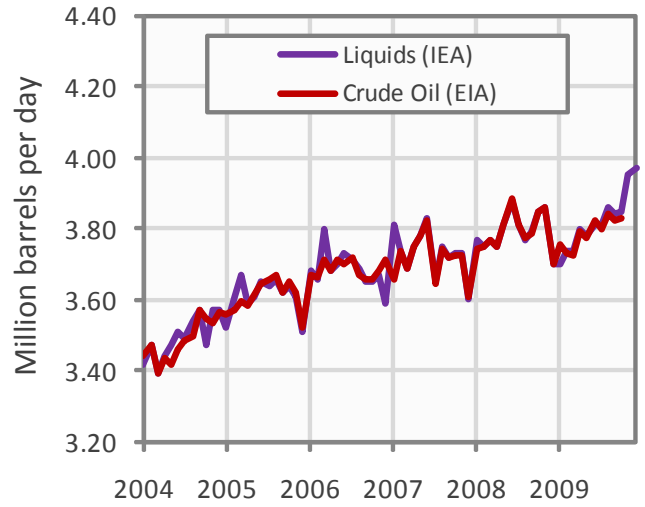

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 103:** Malaysia Liquids Production 1955 - 2008



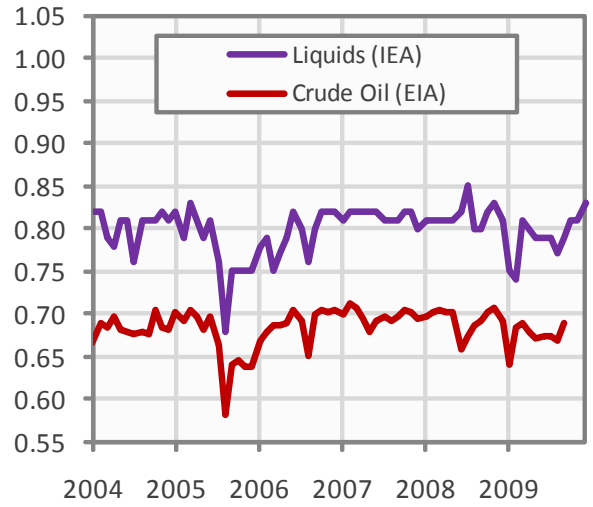

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 104:** China Oil Production January 2004 - December 2009



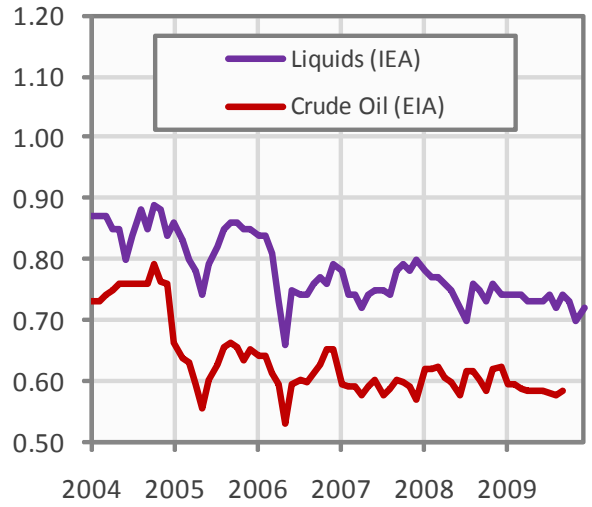

Source: International Energy Agency & Energy Information Administration

**Chart 105:** India Oil Production January 2004 - December 2009



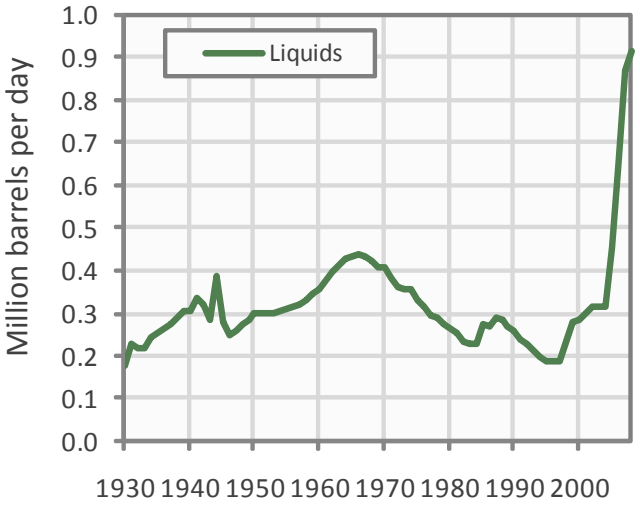

Source: International Energy Agency & Energy Information Administration

**Chart 106:** Malaysia Oil Production January 2004 - Dec 2009



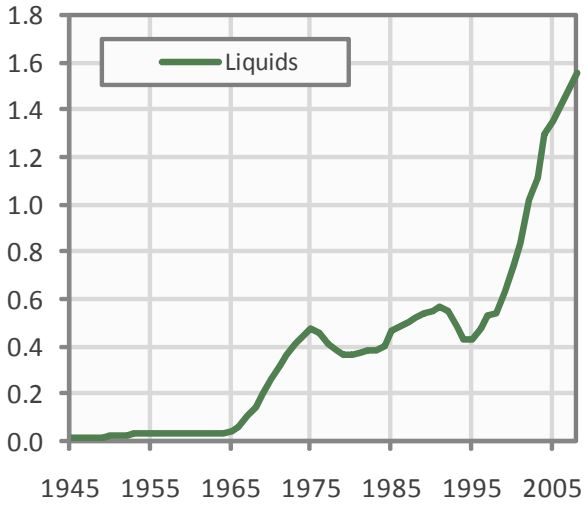

Source: International Energy Agency & Energy Information Administration

**Chart 107:** Azerbaijan Liquids Production 1930 - 2008



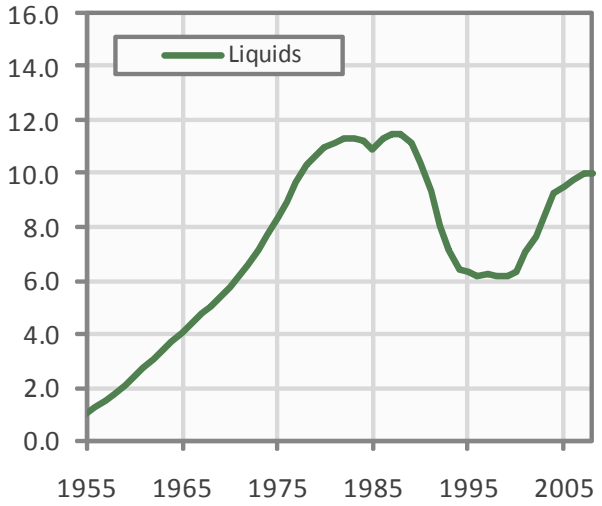

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 108:** Kazakhstan Liquids Production 1945 - 2008



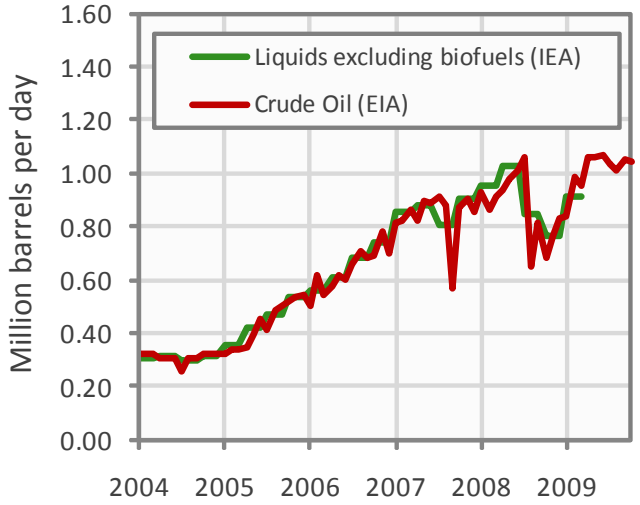

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 109:** Russia Liquids Production 1955 - 2008



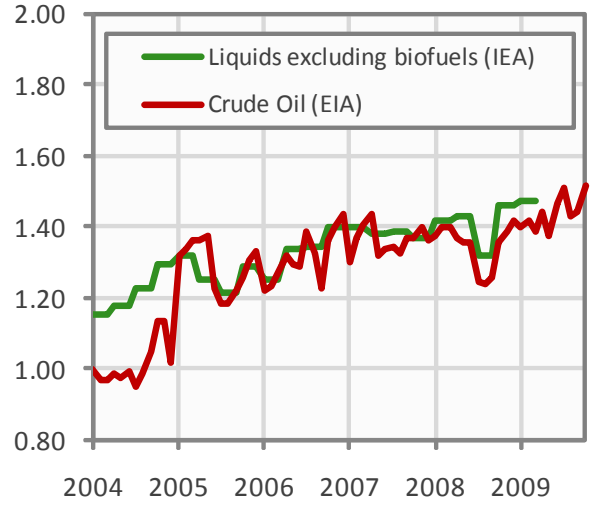

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 110:** Azerbaijan Oil Production January 2004 - Oct. 2009



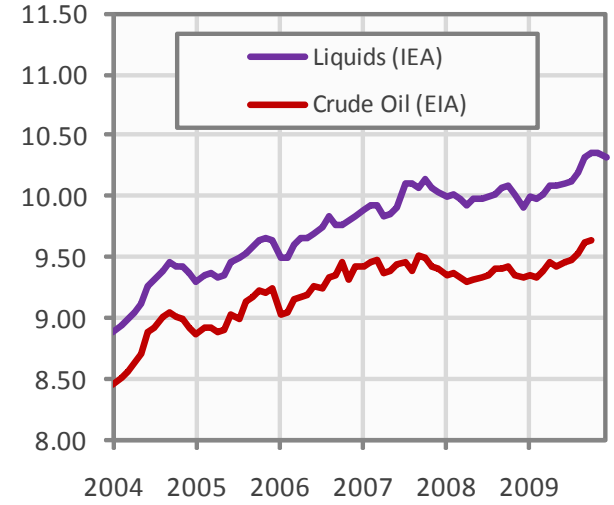

Source: International Energy Agency & Energy Information Administration

**Chart 111:** Kazakhstan Oil Production January 2004 - Oct. 2009



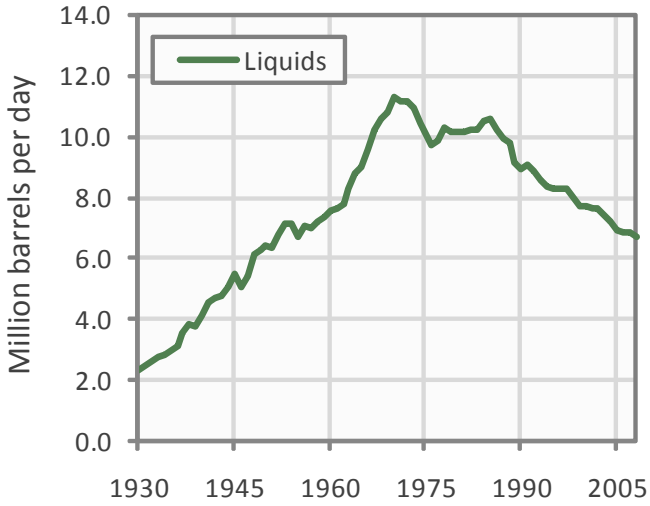

Source: International Energy Agency & Energy Information Administration

**Chart 112:** Russia Oil Production January 2004 - December 2009



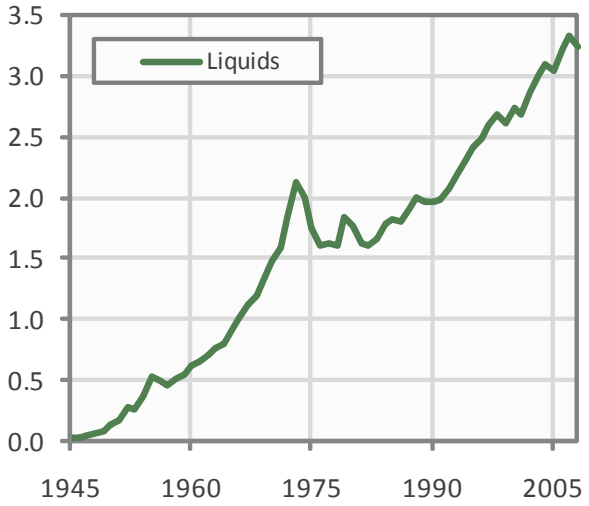

Source: International Energy Agency & Energy Information Administration

**Chart 113:** US Liquids Production 1930 - 2008



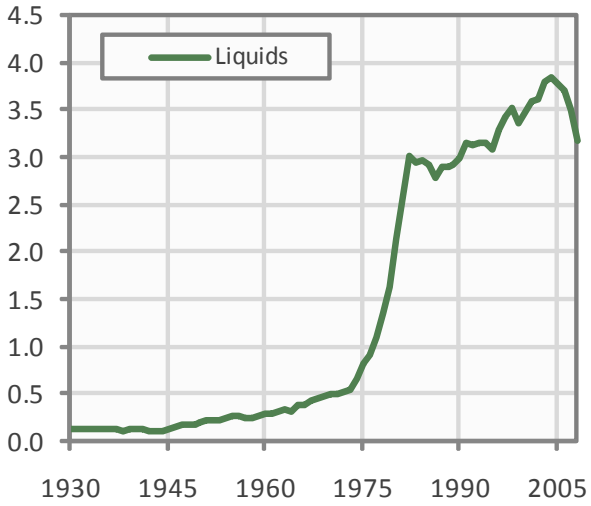

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 114:** Canada Liquids Production 1945 - 2008



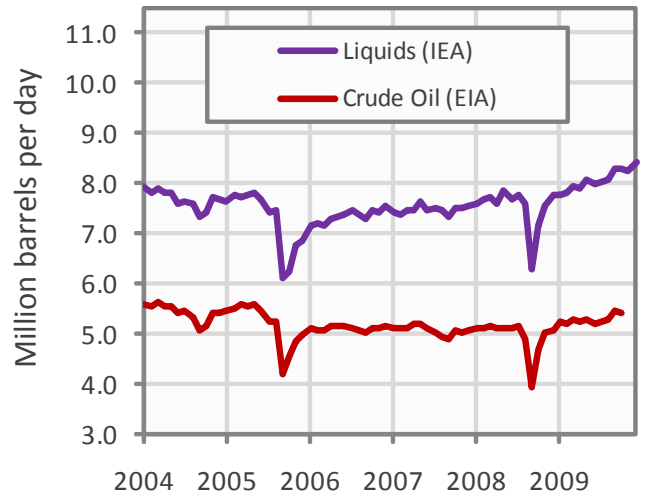

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 115:** Mexico Liquids Production 1930 - 2008



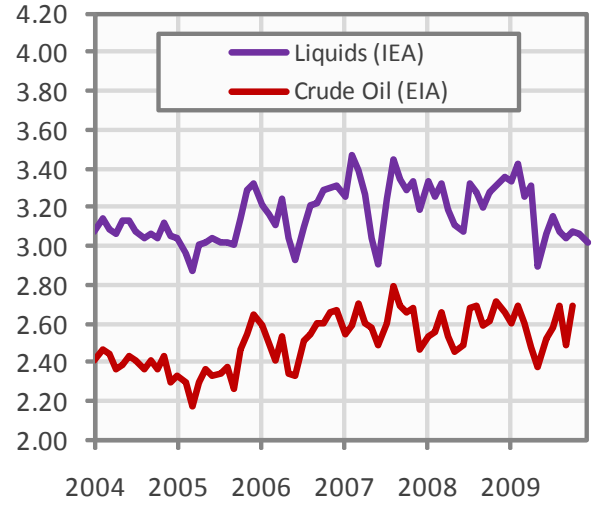

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 116:** US Oil Production January 2004 - December 2009



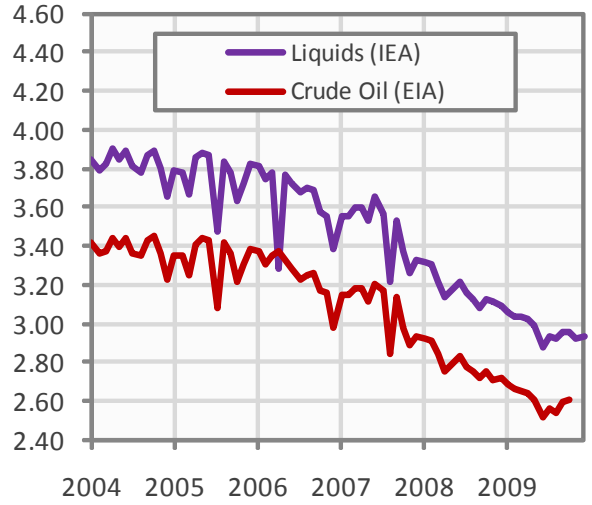

Source: International Energy Agency & Energy Information Administration

**Chart 117:** Canada Oil Production January 2004 - Dec. 2009



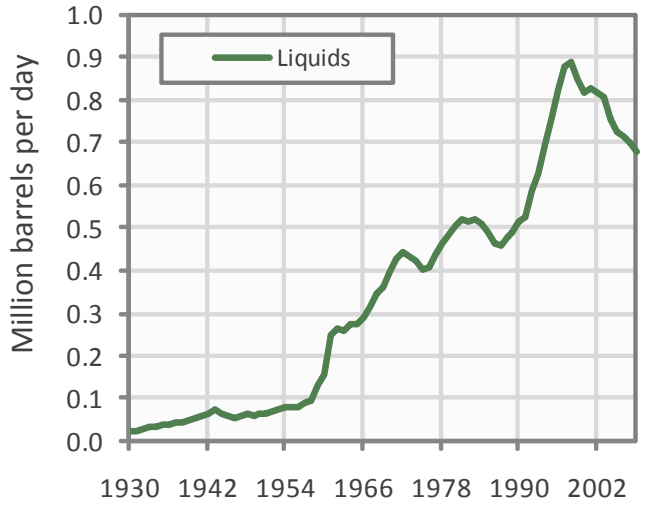

Source: International Energy Agency & Energy Information Administration

**Chart 118:** Mexico Oil Production January 2004 - Dec. 2009



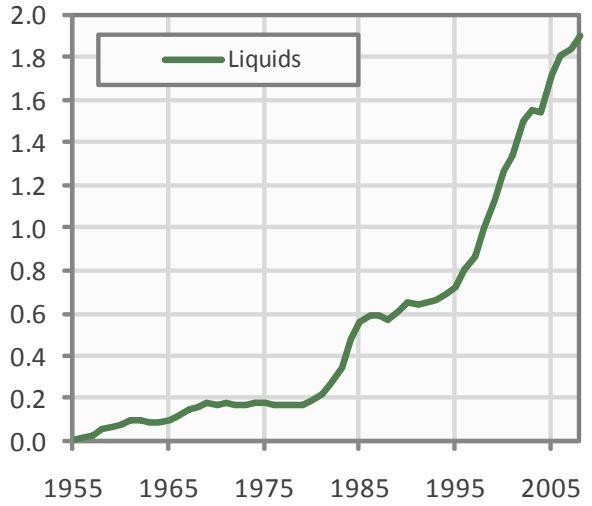

Source: International Energy Agency & Energy Information Administration

**Chart 119:** Argentina Liquids Production 1930 - 2008



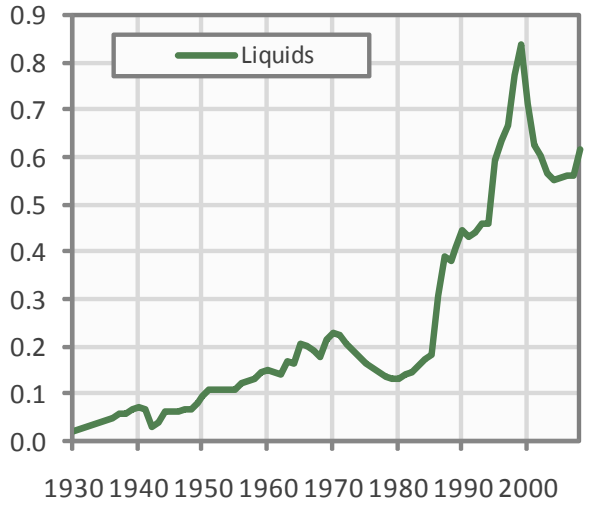

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 120:** Brazil Liquids Production 1955 - 2008



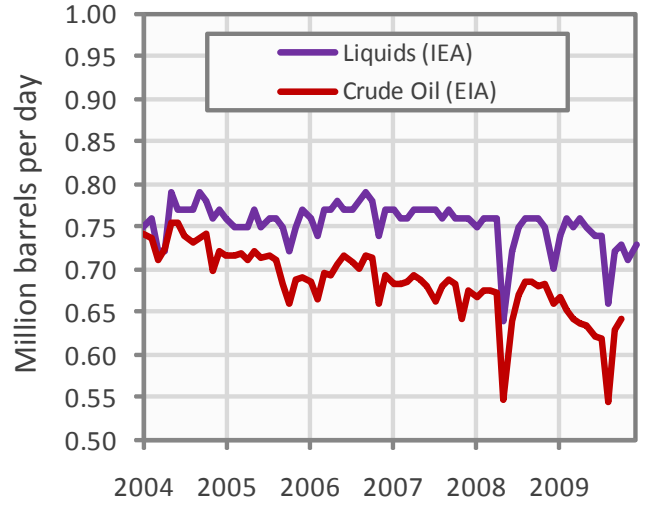

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 121:** Colombia Liquids Production 1930 - 2008



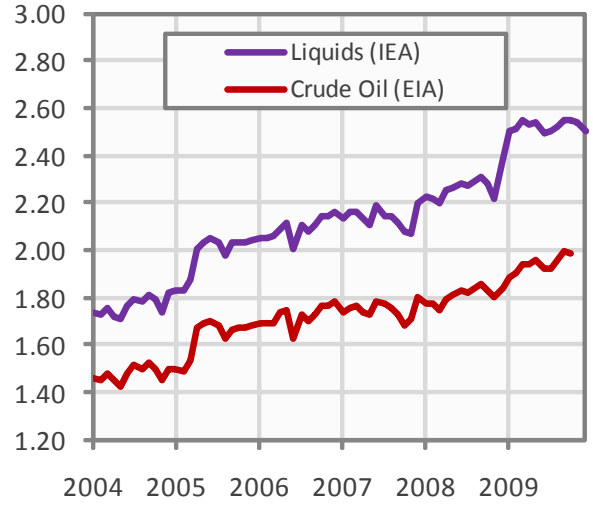

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 122:** Argentina Oil Production January 2004 - Nov. 2009



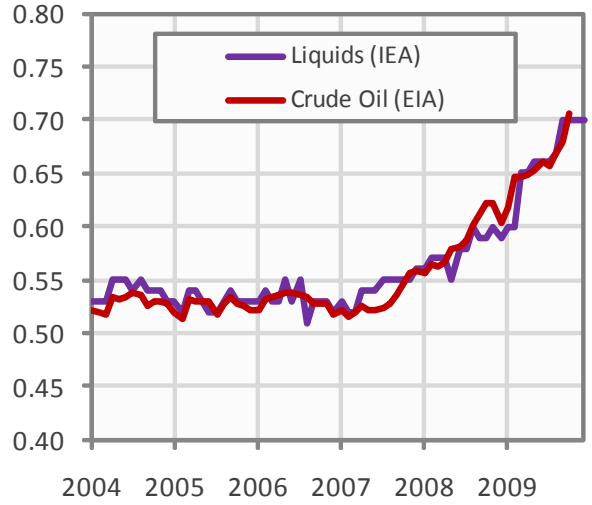

Source: International Energy Agency & Energy Information Administration

**Chart 123:** Brazil Oil Production January 2004 - November 2009



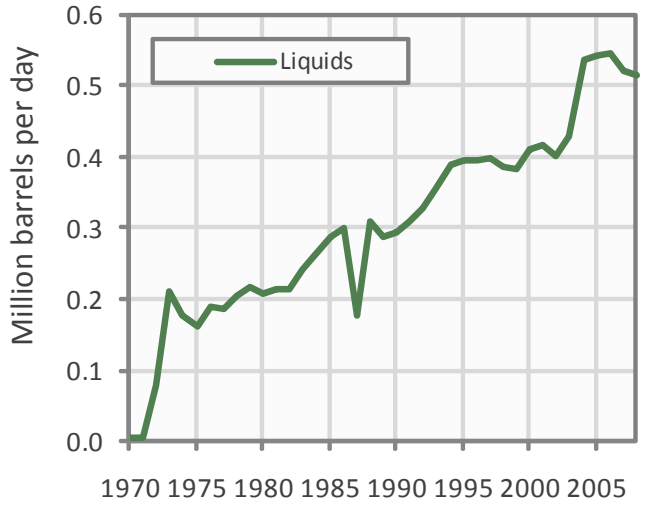

Source: International Energy Agency & Energy Information Administration

**Chart 124:** Colombia Oil Production January 2004 - Nov. 2009



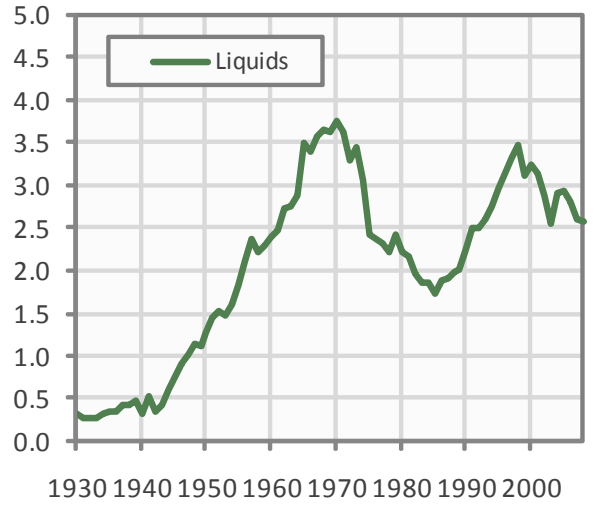

Source: International Energy Agency & Energy Information Administration

**Chart 125:** Ecuador Liquids Production 1970 - 2008



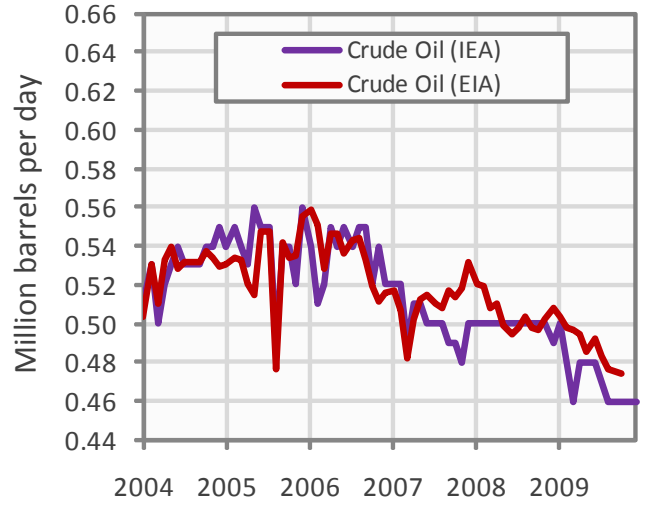

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 126:** Venezuela Liquids Production 1930 - 2008



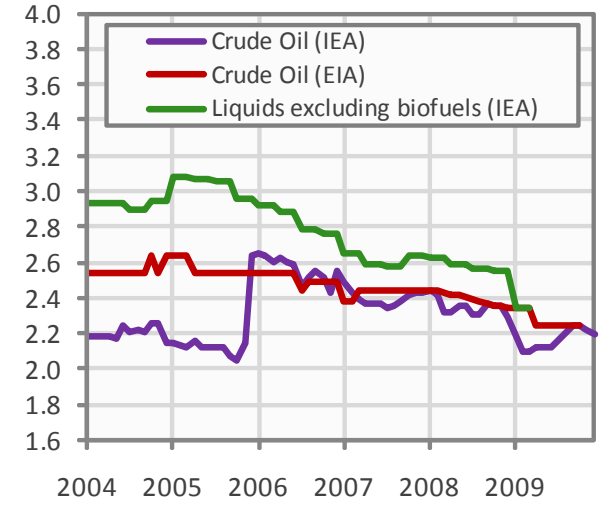

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 127:** Ecuador Oil Production January 2004 - Dec. 2009



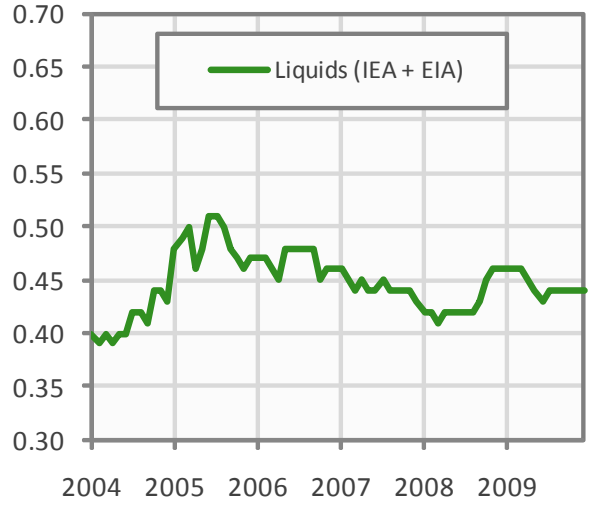

Source: International Energy Agency & Energy Information Administration

**Chart 128:** Venezuela Oil Production January 2004 - Dec. 2009



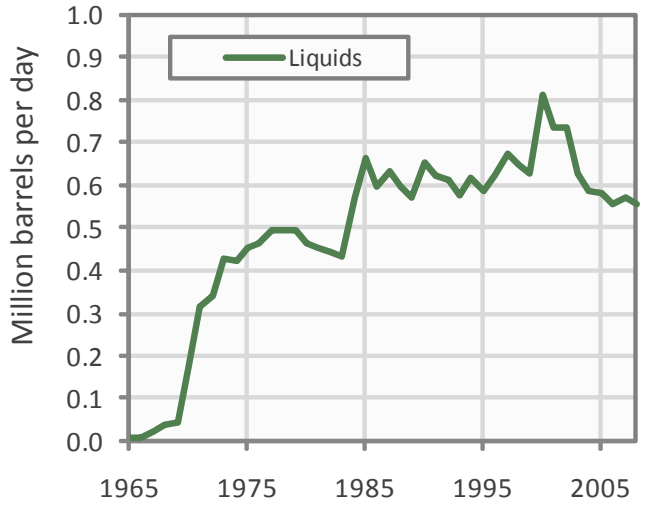

Source: International Energy Agency & Energy Information Administration

**Chart 129** Other S. America oil production Jan. 2004 - Dec. 2009



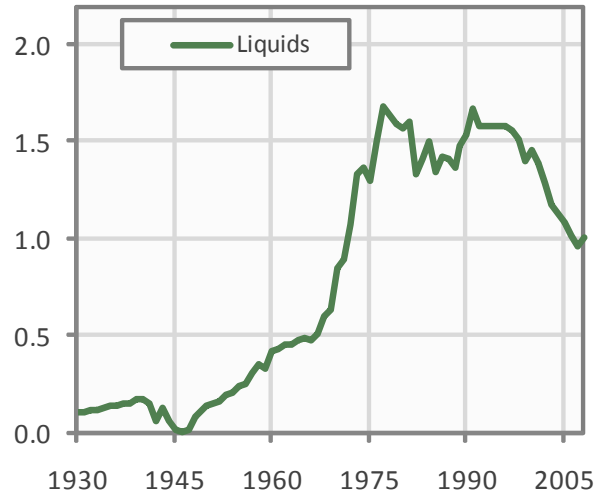

Source: International Energy Agency & Energy Information Administration

**Chart 130:** Australia Liquids Production 1970 - 2008



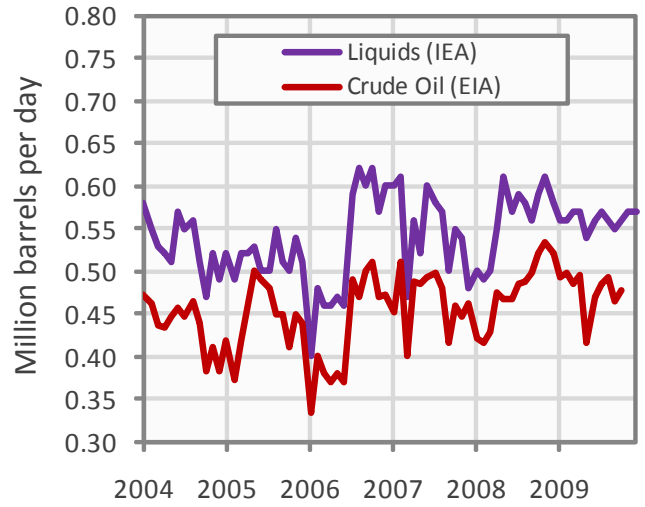

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 131:** Indonesia Liquids Production 1930 - 2008



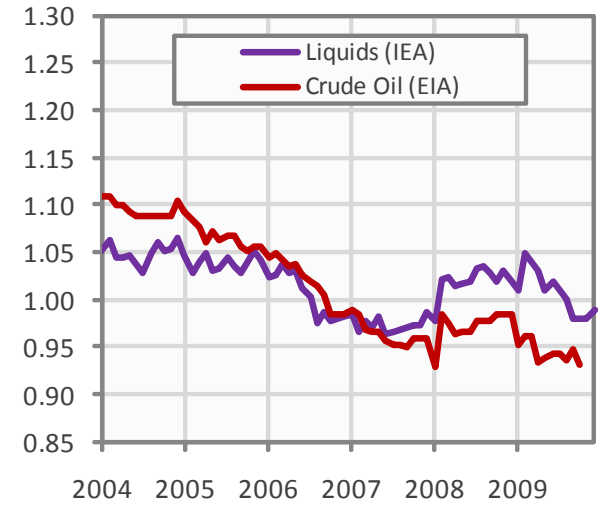

Source: ASPO Ireland & BP Statistical Review of World Energy

**Chart 132:** Australia Oil Production January 2004 - Dec. 2009




Source: International Energy Agency & Energy Information Administration

**Chart 133:** Indonesia Oil Production January 2004 - Dec. 2009




Source: International Energy Agency & Energy Information Administration