

Oil Watch - OECD Oil Production (IEA)

Posted by Euan Mearns on December 5, 2012 - 2:43pm

Executive summary

According to <u>BP</u>, OECD oil production (C+C+NGL) peaked at 21.67 million bpd in 1997. Monthly production data from the International Energy Agency (IEA) now suggests that production has been stable for 5 years at around 18.5 million bpd (Figure 1).

The North Sea (UK and Norway) is still in steep decline. This has been offset by growing production in the USA and Canada where non-conventional tight oil and tar sands production are offsetting declines in conventional crude in these countries.

Mexico, the other big OECD producer, has managed to arrest declines by switching nitrogen injection supply from Cantarell to Ku Maloob Zaap and has had stable production of just below 3 million bpd for three years.

Figure 1 Monthly crude oil production for the OECD countries. All data published in this interim report are taken from the monthly IEA <u>Oil Market Reports</u>.

From May 2007 to August 2010, <u>Rembrandt Koppelaar</u> published an e-report called <u>Oil</u> <u>Watch Monthly</u> that summarised global and national oil production and consumption data from the International Energy Agency (IEA) of the OECD and Energy Information Agency (EIA) of the USA. This is the third in a series of new Oil Watch reports, coauthored with Rembrandt and details crude oil production data for the OECD countries as reported by the <u>International Energy Agency</u>. Earlier editions:

<u>Oil Watch - World Total Liquids Production</u> <u>Oil Watch - OPEC Crude Oil Production (IEA)</u>

Europe

European oil production is dominated by the North Sea and adjacent offshore areas. The big two producers are the UK and Norway with lesser oil production in Denmark, Germany and The Netherlands. Italy also has a small oil industry. The small producers are not documented separately by the IEA and are aggregated as "Other Europe".

European production has annual cyclicity where production is reduced in the summer months to allow for maintenance of aging offshore infrastructure (Figure 2)



Figure 2

UK oil production is in a world of hurt with a decline of 17.4% between 2010 and 2011 reported by BP. This compares to an historic decline rate of around 7%. The 17.4 % figure is corroborated by the IEA data (Figure 3). One might have expected production to bounce back in 2012 but this has not happened. Jan to Sep production in 2012 is 12.8% below the equivalent period in 2011. In September, production hit an historic low of just 730,000 bpd.

In April 2011, a cash strapped UK government raided North Sea production for an additional \pounds 10 billion in tax and this caused activity to freeze over for a while. But the main cause of the free fall has more to do with installations being shut down for repairs such as Buzzard, Schiehallion and Elgin. In the wake of Deep Water Horizon there is hightened awareness of safety and the cost of disaster.

Much of the steel constructed UK infrastructure was designed for 20 years service and has ben out there for 40 years. It seems likely that other offshore provinces such as The Gulf of Mexico, Brazil and Angola will eventually succumb to the same fate as the UK.



Figure 3

Norwegian oil production is also in steady decline though not yet as rapid as in the UK with declines of the order 5 to 7% per annum. The Norwegian industry is in fact less mature than in the UK with extensive areas of under explored territory where substantial new discoveries are still being made, and bringing those on stream helps offset declines in the first generation giant fields like Ekofisk, Gullfaks and Oseberg.



Figure 4

North America

North American oil production has been largely flat over the decade but is now clearly rising again (Figure 5).



Figure 5

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As pointed out by Tad Patzek in a recent <u>Oil Drum post</u>, USA production is best modeled as the sum of Hubbert discovery cycles. The recent rise in US oil production (Figure 6) is due largely to tight oil from formations like the Bakken and Eagle Ford which represent the most recent discovery cycle to be laid upon the production stack. Professor Patzek expects US production to resume its decline once production from tight oil formations peaks in the years ahead.



Figure 6

Canadian oil production has been rising steadily over the decade from <3 million bpd in January 2002 to 4 million bpd in August 2012. Canada now publishes detailed oil production statistics that shows conventional crude production to be flat / in slow decline. All of this growth has therefore come from the tar sands that produced 1.75 million bpd in January 2012. Tar sands production is dependent upon supplies of cheap natural gas, and for so long as this is available, it seems likely that syn crude production will continue to grow.





A significant part of Mexican oil production comes from the giant off shore Cantarell field. In the Page 4 of 6 Generated on December 5, 2012 at 1:43pm EST The Oil Drum | Oil Watch - OECD Oil Production (IEA)

year 2000, state owned oil company Pemex, began injecting nitrogen in Cantarell to boost production and recovery. By 2007 the decision was made to divert nitrogen supplies from Cantarell to neighboring <u>Ku Maloob Zaap</u>. Starved of nitrogen, production in Cantarell (and Mexico) went into steep decline but since 2009 this decline has been arrested with the introduction of oil from Ku Maloob Zaap (Figure 8).



Figure 8

Australia

Australia is a small producer which has been in erratic decline over the decade. Recent production has been mainly <500,000 bpd.



Figure 9

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