By Dave Summers: One problem with defining a peak in global oil production is that it is only really evident sometime after the event, when one can look in the rear view mirror and see the transition from a growing oil supply to one that is now declining. Before that relatively absolute point, there will likely come a time when global supply can no longer match the global demand for oil that exists at that price. We are beginning to approach the latter of these two conditions, with the former being increasingly probable in the non-too distant future. Rising prices continually change this latter condition, and may initially disguise the arrival of the peak, but it is becoming inevitable.

Over the past two years there has been a steady growth in demand, which OPEC expects to continue at around the 1 mbd range, as has been the recent pattern. The challenge, on a global scale, has been to identify where the matching growth in supply will come from, given the declining production from older oilfields and the decline rate of most of the horizontal fracked wells in shale.

At present the United States is sitting with folk being relatively complacent, anticipating that global oil supplies will remain sufficient, and that the availability of enough oil in the global market to supply that reducing volume of oil that the US cannot produce for itself will continue to exist.

Increasingly over the next couple of years this is going to turn out to have created a false sense of security, and led to decisions on energy that will not easily be reversed. Consider that the Canadians have now decided to build their Pipeline to the Pacific. The Northern Gateway pipeline that Enbridge will build from the oil sands to the port of Kitimat.
The 731 mile long pipeline will carry 525 kbd to the port, and a twin pipe will carry some 193 kbd of condensate back to Bruderheim to help in the processing of the initial crude. It will, sensibly, move the oil that was to have come down through the Keystone pipeline to American refineries instead to tankers out to the Canadian coast, where it will be shipped to Asia to meet their growing demands. Given the investment in the pipe, infrastructure etc once this oil is committed to that market and the US will not be able to gain that supply back when it is needed in a few years.

There is a secondary impact to the opening of that market that may not be evident for a little time, but it something that the Russians discovered after the gas pipeline connected Turkmenistan to China. Suddenly there is a second market for the product, and producers are no longer tied to having to accept the price that the sole purchaser is willing to pay. At the moment, when there is a sufficiency of oil, that is an incidental, with significant impact only in improving the economics of the oil sand operations, but since it now ties the American refineries that would have received this oil more closely to the Venezuelan production it now receives (a somewhat less reliable supplier) this change remains as something of a future concern. It is not likely, in itself, to initially change the price of oil much (a minor increase) but it will change the names and nationalities of those that profit from the trade.

The problems that the Keystone pipeline had are, to a degree, a function of the lack of concern over the supply of oil to the American market. As long as oil production continues to increase, from the Bakken and Three Forks in North Dakota, and the Eagle Ford in Texas, then there is no clear evidence for concern. But those wells are cumulatively starting to reach peak production, and the next shales on the list (the Spearfish and the Tyler) don’t hold the potential to match the gains that have been achieved to date. Particularly this is when, as the North Dakota DMR (https://www.dmr.nd.gov/oilgas/presentations/ActivityUpdate2014-06-11NCSLBismarck.pdf) notes, the wells see an average decline of 65% in the first year.
The projections that gains in production continue thus rely on a continued high level of drilling and production with a defined rig count required having been estimated, and an assumed sustained level of production even beyond the time that the “sweet spots” start to disappear.

At the end of June, 2014 the rig count in North Dakota is less than 190 (DNR says 189, but Kirk Eggleston notes that some 15 of these are moving, so that the real number is 173, a bit less than 225. That suggests that peak production may be delayed, and lowered from 1.75 mbd down to around 1.4 mbd. This reduction in short-term supply will have less impact in the US than elsewhere since it will be used to release oil that the US would otherwise have bought to the world market, but less
than anticipated, and at a slower rate than expected. (Note that Eagle Ford production growth rate is also slowing and that this also affects OPEC projections which anticipates that US oil production will grow some 950 kbd this year).

At the same time, as I have noted in an earlier piece (http://bittooth.blogspot.com/2014/06/tech-talk-optimism-is-becoming-harder.html) the reliance of many models of future oil supply have focused on Iraq as the next major supplier to sustain growth in production, even as other suppliers decline. But those projections are increasingly obsolete. It is unrealistic to expect the oil export business from Iraq to be sustained and continue to grow in the face of the developing civil war. The nature of the conflict makes it difficult to see how it can be easily resolved, and particularly if the country becomes divided, then the oil pipelines become a target of opportunity to attack the financial underpinnings of the different sectors. It is likely that the pipeline from Kurdistan into Turkey will carry increasing volumes up to Ceyhan and thence to the world market, under better security, given that does not now venture into Sunni territory, but the vulnerabilities likely remain.

The result of these declines in anticipated production (not to mention Libya, the Sudan’s etc) is likely to become evident within a year, while demand continues to grow. The balance need change only a small amount however, for the consequences to be dire. As Mr. Micawber said in “David Copperfield (http://www.telegraph.co.uk/finance/personalfinance/9066005/What-Charles-Dickens-said-about-money-12-memorable-quotes.html)”:

Annual income twenty pounds, annual expenditure nineteen [pounds] nineteen [shillings] and six [pence], result happiness. Annual income twenty pounds, annual expenditure twenty pounds ought and six, result misery.

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Comments