

Global Oil Watch

Submission to PIU 1st September 2001

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1st September 2001

Response to PIU Energy Review

<http://www.cabinet-office.gov.uk/innovation/2001/energy/energyscopeoil.shtml>

We have the following comments in relation to the Energy Review:

1. Table 3 sourced from the IEA has been superseded by reality. The production of Crude Oil in the UK peaked in 1999. (The peak month was March 1999 at 13.097 MTOE – source DTI).

The DTI's figures for production are as follows:

Total Energy

	TABLE 1.1. Indigenous production of primary fuels					<i>Million tonnes of oil equivalent</i>	
	Total	Coal	Petroleum	Natural gas	Primary electricity	Nuclear	Natural flow hydro
1995	269.2	34.1	142.3	71.2	21.25		0.45
1996	282.0	33.5	142.0	83.9	22.18		0.33
1997	282.7	32.7	140.4	86.2	22.99		0.42
1998	287.7	28.0	145.4	90.3	23.44		0.52
1999	297.7	25.4	150.2	99.3	22.22		0.53
2000	288.5	21.5	138.3	108.5	19.64		0.52

(we don't know why the DTI and IEA figures differ)

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Production in 2001 has continued to drop (also source DTI).

The DTI's consumption figures are as follows:

Total Energy

TABLE 1.2 Inland energy consumption: primary fuel input basis

ANNUAL
DATA

Year	Total	Coal ¹	Petroleum ²	Natural gas ³	Primary electricity		
					Nuclear	Natural flow hydro ⁴	Net imports
<i>Unadjusted⁵</i>							
1995	219.9	50.4	74.8	71.7	21.25	0.45	1.38
1996	231.3	47.5	77.1	82.7	22.18	0.33	1.44
1997	226.0	42.6	74.7	83.9	22.99	0.42	1.43
1998	229.3	42.5	74.5	87.2	23.44	0.52	1.07
1999	229.1	38.1	74.4	92.6	22.22	0.53	1.22
2000	230.7	40.1	73.1	96.2	19.64	0.52	1.22

If there is a straight line reduction of 10 MTOE per annum from 150 MTOE in 1999 we then hit 70 MTOE in 2007. That is the point at which the UK becomes a net petroleum importer. It, of course, is a big "if".

2. Remaining Oil Reserves is the key driver as that influences the global price. The different prices of different blends of oil tend to follow the same curves. Similarly the prices of other sources of energy are influenced by oil prices oil being the marginal energy source.

Technologies such as Gas To Liquids then link Oil Prices to NGL prices as does The potential correlation through the generation of electricity etc.

It is generally accepted that the reserves figures published globally are not reliable. Indeed the methodology for the production of many of those appears to be linked more to production capacities than geology.

There are a number of different views globally that of Colin Campbell et al which points to a peaking in the production of conventional crude oil in 2005 and later for non-conventional oils.

The alternate view is that of the USGS.

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The USGS methodologies are based upon taking the 1995 figures for reserves and applying two calculations. One is based upon estimates of potential discoveries. The other applies a formula used historically in the USA to handle under declarations of reserves to the global reserves figures (reserves growth).

Both of these calculations are done for 30 years taking us to 2025. They are methodologies that stand up to a shallow review, but they accept themselves that their predictions could be out 100% (for reserve growth).

The USGS prediction is for 649 Gb of additional discoveries and 612 Gb of “reserve growth”.

Because we are now 1/6th down the timescale of the USGS 2000 report it is possible to empirically test for the potential 100Gb of discoveries and 100 Gb of reserve growth. Sadly, however, the global reserves figures are not much use in doing this calculation for either purpose. However, an analysis of announced discoveries would be of some use. The information is available in an unstructured manner in the public domain.

A different more empirical methodology is that used by RC Duncan. He has just generated his 6th prediction which is based upon recent production information and a heuristic analysis. He points to a peak in production (conventional) in 2005. (RC Duncan 30th August 2001)

The key issue on price, however, is whether OPEC’s discipline holds together from today (1st September) when they are scheduled to cut production by 1mbd. If they can do this then the Cartel will manage to keep prices relatively high regardless.

3. Is oil replaceable?

In essence oil as a transport mechanism can be replaced if there is an alternate source of energy. The second law of Thermodynamics is the key driver in that translating from one type of energy to another is challenging. 100% efficiency is not possible.

Hydrogen would be a good transport mechanism if the problem of storage can be solved. Hydrogen, however, is not an energy source.

Natural Gas does offer a temporary relief. However, its price will be driven both by pressures from oil and electricity generation. The substantial problem for Gas is that it is generally in the wrong place and needs either liquefaction or pipelines.

The Athabasca sands, Orimulsion and oil shales offer some alternative, but they also suffer from the costs of overburden and the fact that they are energy

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intensive.

The transport sector will be constrained by the available production of crude oil.

4. Prices

We are expecting a creep upwards in the oil price. The market is not very elastic. And financially it is in OPEC member states' interest to maintain prices above \$25. We feel this could result in a price spike later this year although this will be affected considerably by what might happen in Iraq.

5. Oil Stocks

We believe that the UK should aim to build on oil stocks. Such stocks could be used for price stabilization.

6. OPEC and supply

OPEC will grow into a stronger position as non-OPEC oil sources decline. It may be there already. We will find out later this year. However, the UK should look towards stabilized supply arrangements with OPEC nations and possibly with Canada.

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Global Oil Watch