

THE ASSOCIATION FOR THE STUDY OF PEAK OIL AND GAS “ASPO”

NEWSLETTER No. 74 – FEBRUARY 2007

ASPO started as a network of scientists and others, having an interest in determining the date and impact of the peak and decline of the world’s production of oil and gas, due to resource constraints. Now, independent national affiliates are in existence or formation in Australia, Austria, Canada, China, Egypt, France, Germany, Ireland, Israel, Italy, Luxembourg, Japan, Korea, Mexico, New Zealand, Norway, Portugal, Russia, South Africa, Spain, Sweden, Switzerland, United Kingdom and the United States.

Missions:

1. *To evaluate the world’s endowment and definition of oil and gas;*
2. *To study depletion, taking due account of economics, demand, technology and politics;*
3. *To raise awareness of the serious consequences for Mankind.*

Foreign language editions are available as follows:

Spanish: www.crisisenergetica.org

French: www.oleocene.org (press “Newsletter”)

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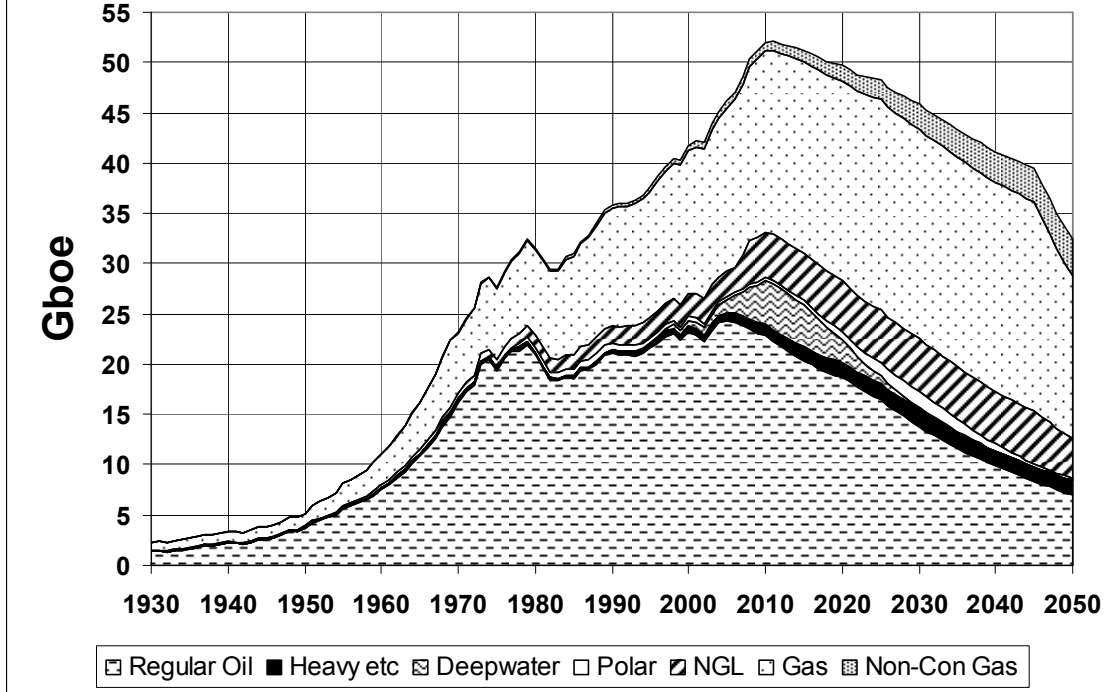
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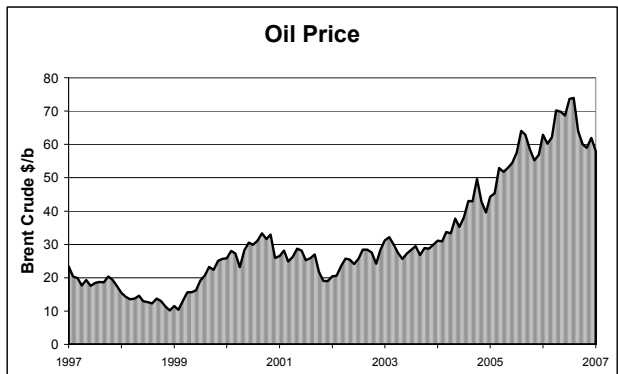
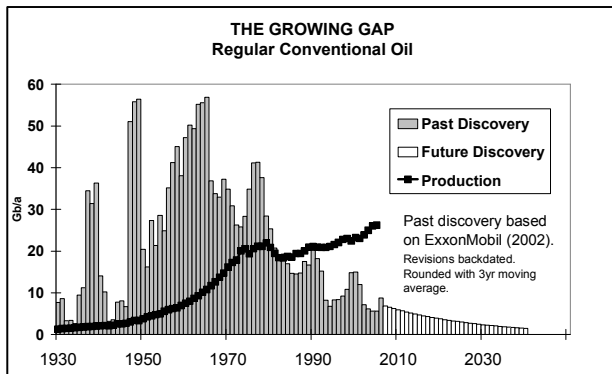
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The General Depletion Picture

OIL & GAS PRODUCTION PROFILES 2006 Base Case



ESTIMATED PRODUCTION TO 2100								End 2006			
Amount			Gb	Annual Rate - Regular Oil					Gb	Peak	
Regular Oil				Mb/d	2005	2010	2015	2020	2050	Total	Date
Past	Future	Total	US-48	3.3	2.6	2.1	1.7	0.4	200	1971	
Known Fields	New		Europe	5.0	3.4	2.5	1.8	0.3	71	2000	
967	764	119	Russia	9.2	9.5	7.5	6.0	1.5	225	1987	
	883		ME Gulf	20	20	21	23	11	634	2020	
All Liquids			Other	29	27	23	19	6	720	2004	
1102	1398	2500	World	66	62	56	51	19	1850	2005	
2005 Base Scenario			Annual Rate - Other								
M. East producing at capacity (anomalous reporting corrected)			Heavy etc.	2.3	3	4	4	4	150	2021	
Regular Oil excludes Heavy Oils (inc. tarsands, oilshales); Polar & Deepwater Oil; & gasplant NGL			Deepwater	3.6	12	11	6	1	69	2011	
Revised 13.1.07			Polar	0.9	1	1	2	4	52	2030	
			Gas Liquid	6.9	12	13	14	14	355	2035	
			Rounding		-1	0	-2	-3	25		
			ALL	80	90	85	75	40	2500	2010	



791. Regional Assessment – MIDDLE EAST (Minor)

Before coming to the Middle East Gulf Region, the most important of all, it is useful to cover the minor oil producers of the Middle East, comprising Bahrain, Dubai, Oman, Qatar, Sharjah, Syria, Turkey and the Yemen. We may note at the same time that Qatar is anything but a minor producer in gas terms, possessing the world's largest field.

MIDDLE EAST (MINOR)

The combined land area of these countries is 1.8 million km², together supporting a population of 116 million. The regional geological terms they all fall within the limits of the Middle East basin, where prolific oil was generated at a time of global warming about 150 million years ago in a rift that opened as the African and Eurasian continents moved apart.

Bahrain

Bahrain is a small island off Saudi Arabia, to which it is now linked by a causeway. It became a British protectorate in 1861, being used by Britain as a base from which to control piracy, as it began to exert its influence over the Middle East. It later became an independent emirate, which currently supports a population of about 700 000.

Caltex (Chevron-Texaco) took an oil concession to Bahrain in the 1920s, finding a major field at Awali in 1932, with some 1.4 Gb of oil, which proved to be the gateway to Saudi Arabia. Production commenced in 1938 and rose to a peak of 77 kb/d in 1970. Different databases report widely different numbers, but 2006 production is here taken to be 34 kb/d. It is unlikely that any new significant oil finds will be made as some 22 exploration wells have already been sunk on this small island, but there might be some potential for very deep gas.

Dubai and Sharjah

These relatively small territories are members of the United Arab Emirates at the southern end of the Persian Gulf, bordering the Oman. The City of Dubai has become a prosperous commercial centre and seaport for international trade. Certain of the offshore islands, having considerable strategic importance flanking the Straits of Hormuz, through which Middle East oil exports pass, have been claimed by Iran.

The third exploration well to be drilled off Dubai found the Fateh Field in 1966 with about 2.5 Gb of oil, which was followed in 1970 by a second discovery with about 1.7 Gb. Production commenced in that year and rose to peak at 441 kb/d in 1991 before declining to its present level 290 kb/d (2006).

Several small finds of oil and gas have also been made in the adjoining territory of Sharjah where production peaked in 1997 at 70 kb/d, having since fallen to 50 kb/d.

Oman and Yemen

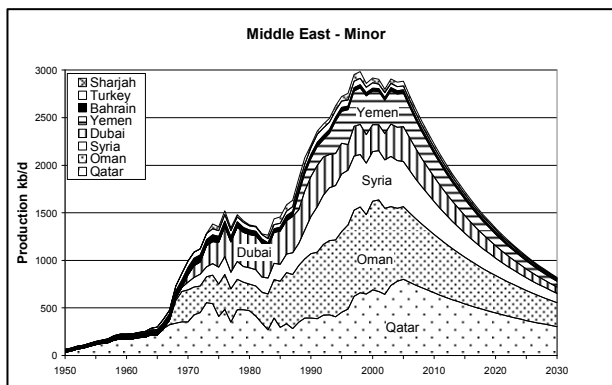
These two countries form the southeast borderland of the Arabian Peninsula, between the Persian Gulf and the Red Sea. A belt of mountains, rising to as much as 3000m, separate a narrow relatively fertile coastal strip from the deserts of the Rub'al-khali. Together, the territories cover an area of some 775 000 km² supporting a population of about 20 million. Oman has one of the highest fertility rates in the world at seven children per woman. Muscat, its capital, has long been a trading port settled by a mixed population of indigenous Arabs as well as those of Indian, Iranian and African descent.

Exploration in Oman commenced in the 1950s and has been maintained at a high level with the drilling of some 600 exploration boreholes, which have yielded a large number of mainly modest discoveries, totalling almost 14 Gb. Shell has been one of the principal operating companies. Production commenced in 1967, rising to a peak of 964 kb/d in 2001, before falling relatively steeply to 738 kb/d in 2006, partly as a consequence of horizontal drilling which accelerated depletion. It is set to continue to decline at about 4.5% a year, despite continued exploration which is here expected to find about 600 Mb in relatively small fields.

In the case of the Yemen, exploration started in 1962, but no more than 3.2 Gb have been found despite the drilling of 340 exploration boreholes. Production commenced in 1986 rising to a peak of 354 kb/d in 2000. It has since fallen to 415 kb/d and appears set to decline at about 7% a year.

Syria

Syria is an ancient country covering 185 000 km² on the northern margin of the Arabian Peninsula between Turkey, Iraq, Jordan and the Mediterranean coast. A fertile coastal plain is separated from an interior desert by a range of mountains. It supports a population of about 16 million, many living in the capital, Damascus, at the southern end of the country bordering the Lebanon and Israel, the scene recurring conflict and political tensions in recent years. The country had been a cornerstone of the Ottoman Empire until its defeat in the First World War, after which it became a French protectorate, prior



to gaining independence in 1941.

In geological terms, only the eastern part of the country reaches the prolific Middle East oil province. Shell has been one of the more active oil companies in the country, where some 300 exploration boreholes have found almost 7 Gb in mainly small to moderately-sized fields. Production commenced in 1968 and rose to a peak of 600 kb/d in 1991 before declining to 423 kb/d in 2006.

Turkey

Turkey is another ancient country of mainly mountainous territory separating the Black Sea from the Mediterranean. It supports a population of 65 million people, 80% of whom belong to the Sunni branch of Islam. It also has a large Kurdish community in the southeast of the country having separatist aspirations, which may well be stimulated further in the not unlikely break-up of Iraq. Turkey was the seat of the great Ottoman Empire, which at its peak held sway from the gates of Vienna to North Africa, including the Middle East apart from Iran. During the 19th Century it acted as something of a buffer between the British and Russian empires. It later fell under German influence which led it into the First World War on what proved to be the losing side. Britain and France then divided up its Middle East territories into new administrations, which eventually became independent, if somewhat artificial, States. Turkey has seen large scale post-war emigration, especially to Germany, and, despite its deep cultural and historic differences, may soon find itself incorporated into what can be called a new empire of the European Union, which evidently seeks eastward expansion for economic hegemony.

The northern limits of the prolific Middle East oil province extend into Turkish territory, but the structures are mainly breached, such that much of the oil they may have once contained has escaped. It has been extensively explored by over 1000 exploration boreholes, which have yielded no more than about a billion barrels. Production commenced in 1954, reaching a peak of 87 kb/d in 1991 before declining to 42 kb/d in 2006.

Region

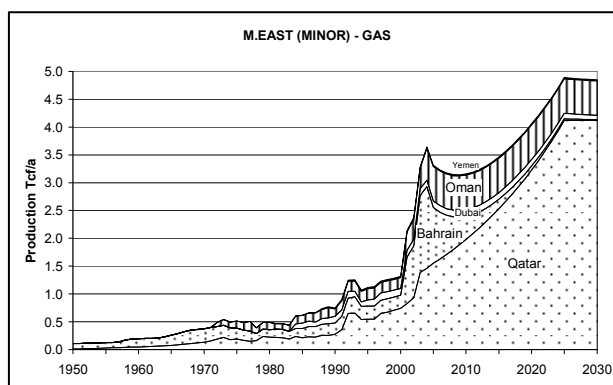
It is noteworthy that different databases give widely different estimates of not only the Region's reserves but annual production, making analysis particularly difficult. A so-called best estimate suggests that some 46 Gb of oil have been found by about 2500 exploration boreholes. Not more than about 4 Gb are expected from future exploration. Production commenced in 1938, rising to a peak of 2.9 Mb/d in 2003. It is now set to decline at about 5% a year, falling to around 800 kb/d by 2030. Consumption stands at 1.2 Mb/d, or almost 4 b/a per capita. The Region is at present a modest exporter, but will cease to be self-sufficient by around 2020, assuming no change in consumption.

Gas

The Region has substantial gas reserves concentrated in Qatar, which is an 11 500 km² promontory out from Saudi Arabia supporting a population of about 600 000. It boasts the world's largest gasfield, found in 1971, straddling the boundary with Iranian waters. The Qatar section, known as the North Field, is reported to contain as much as 1000 Tcf, but some doubts have been expressed following the results of a recent deep well. In geological terms, the country lies on a transverse uplift which has brought into range deep-seated gas, generated in the Silurian and held in irregular and impersistent Permian sandstone reservoirs. Substantial amounts of associated gas liquids have also been identified. Gas production commenced in 1950 and has risen to 1.5 Tcf/a. Large-scale liquefaction plants have been built to make the country a major exporter of LNG, which is currently running at about 170 kb/d. Although production could rise still higher in the future, the Government has recently announced a policy of conservation preferring to extend production at present levels farther into the future.

The future of the region is inevitably deeply linked with that of the rest of the Middle East. Turkey, acting in a sense as something of a bridgehead for Europe, may come to exert greater control in the region, rediscovering its Ottoman past. Syria too may also find itself incorporating some of the Sunni regions of Iraq, if that country should fragment. Central to the issue is the eternal conflict with Israel which may evolve to that country's disadvantage if it loses its substantial foreign military and economic subsidy in the face of a deep world economic recession consequent upon Peak Oil.

Although the countries of the Region will be unable to maintain self-sufficiency in oil for long, we may note in passing that Qatar and the Emirates support expanding international airlines, whose access to cheap fuel may give them a growing competitive edge in the years ahead.



792. Norwegian Contraction

Norway's two major oil companies, Statoil and Norsk Hydro, have agreed to merge; Norsk Hydro having

previously merged with Saga which was Norway's third largest oil company. Although the merger is depicted as a move to conquer new heights for Norway in international operations, in reality it speaks rather of the dwindling potential of Norway, where oil production peaked in 2001, being set to decline at about 7% a year, reflecting the high levels of operating efficiency.

In earlier years, Norway was very conscious that its oil and gas were part of the national patrimony to be developed cautiously under close government control. Statoil was established as a State company, being ostensibly funded largely by the foreign companies although they were allowed to take the cost of doing so as a charge against Norwegian taxable income, meaning that in fact the unconscious taxpayer footed the bill through lost revenue. Attitudes have since changed towards a more short-term open market philosophy as oil wealth floods into the country, and there have even been moves to privatise Statoil. But, having now passed its peak, the country has good reason to revert to its earlier cautious national policies. The new Statoil (whose name has not yet been chosen) could be encouraged to acquire the rights of the foreign companies, and plan an orderly development of the substantial remaining gas resources of the country in order to make them last as long as possible. In this respect, Norway might learn from the unfortunate experience of Britain across the North Sea, which depleted its oil and gas at the maximum rate possible, now facing exhaustion within 10-15 years. Britain's remaining resources are largely owned by foreign companies with the right to export to their home countries, despite the country's own dire needs. But Norway has its fair share of flat-earth economists for whom money today is worth more than security tomorrow, so it is far from sure that sound national policies will be adopted.

So far as international operations are concerned, the new Norwegian company will find the going ever harder. The opportunities are likely to dwindle, as one country after another passes its production peak and comes to recognise the need to conserve its resources for the use of its own people. Foreign contractors with any needed special expertise can always be brought in if necessary without conveying ownership of the resources to foreign companies.

Although Norway's oil and gas are set to decline to exhaustion by the mid-Century, it retains the huge advantage of a massive hydro-electric potential, which may indeed even improve as near-monsoon rainfall imposed by global warming, which is already being experienced, keeps the reservoirs full.

Norway is taking a strong position in a new initiative backed by the Society of Petroleum Engineers and the United Nations to bring much needed transparency to reserve reporting. With better data, the issue of depletion and the inevitable peak and decline of oil and gas production would be entirely self-evident. Norway has much expertise to offer in this regard, having what is probably the world's best reserve reporting system.

793. ASPO Norway

ASPO Norway is in the process of formation under the direction of Amund Prestegard, the producer of the video entitled *Peak Oil – Imposed by Nature*. It plans to offer to host the 2008 International ASPO Conference, giving particular attention to the wide-ranging consequences of Peak Oil, in social, economic, political and environmental terms. A new website www.asponorway.org will open in March : and Amund Prestegard can be reached at mail@asponorway.org

Life has not always been easy in the rugged terrain of Norway at the northern limits of Europe, but the hardships have bred a deep-seated sense of national and community co-operation which survives in the mindset despite the ravages of oil-based affluence. So Norway has much experience to offer in addressing the challenges of the post-Peak world.

794. The Peak of Peaks

ASPO is concerned with studying the nature and impact of the peak of oil and gas supply, but coal and uranium, as well as mineral deposits are subject to the same general pattern of depletion, having been formed in the geological past. It is well said that we started *running out* when we consumed the first gallon of oil or dug up the first sack of coal. But finally *running out* is not the main issue, when what matters is the shift in energy supply from growth to decline, which is likely to have very far-reaching consequences for *Homo sapiens*. As Professor Bardi has pointed out (Newsletter 73, Item 783), British coal production peaked in 1923. There is still plenty left in the ground, but what remains is less accessible and more costly to produce, yielding less and less net energy. It is obvious that other coal-producing countries face the same pattern of depletion. In fact, 90% of the world's coal reserves lie in just six countries. China is by far the highest producer, but has half the reserves of the United States, and is expected to peak within fifteen years. As with oil, there are different categories of coal ranging from anthracite to lignite : each with its own costs, characteristics and net energy yield. It is the same with uranium : the high grade deposits are being depleted,

even if it is possible to extract radioactive material from seawater with the help of resin-coated strings. Clearly, the easier and cheaper sources of energy have been tapped first. The net energy yield is also low when everything for the construction of reactors to the disposal of waste is taken into account. Oil and gas are probably at the head of the list in terms of energy yield, so it may mean that the imminent peaks of their production will mark the peak of overall energy supply (See : Schindler J.& W.Zittel,2006, *Energieversorgung am Wendepunkt II* (in German) – LBST Daimler str 15, D85521 Ottobrunn, Germany)

Driving through Europe brings home just how much energy is used, and indeed wasted. The roads are choked with traffic, which is often stalled in jams of cars carrying but one passenger in the most inefficient of ways ; the skies are criss-crossed with vapour trails ; the hotels are ablaze with light and deafened by the sound of awful electronic music ; and the shops are full of people buying far from essential consumer goods. Convoys of enormous trucks, burning up diesel fuel, keep the consumer outlets supplied, often from distant sources. While most people seem to aspire to still more of the same, their appearance suggests stressful rather than happy lives as ill-clad and often obese men with shaved heads and aggressive semi-bearded chins lead over-weight women down the malls.

Violence and crime accompany the affluence, and international tensions grow in the quest for markets, financial hegemony and access to energy resources. The indigenous people of Europe are swamped with immigrants attracted by the affluence, who despite being urged to integrate, naturally find themselves isolated having been uprooted from their traditional lives and threads of mutual support. These developments seem to have been accompanied by changes of mindset : people no longer measure happiness or pleasure in abstract terms but rank them in monetary cost or the thrill of the bargain. The pleasure of a picture comes less from its artistic merit than its potential value at the auction house. Many children spend their days glued to screens watching TV or playing gross computer games, hoping that Father Christmas will bring another sack of plastic toys to be duly stacked on shelves beneath the loudspeakers.

But there are some hopeful signs in the proliferation of solar panels in southern Germany and windmills in Denmark. It is not now uncommon to pass special enormously long trucks carrying the blade of new windmill.

So, at the end of the day, there may be some grounds for hoping that the peak and decline of oil and gas, which have contributed so much to the present condition, may – far from spelling catastrophe – herald the birth of a more benign age at least for the survivors of a difficult transition.

795. An Open Letter to CERA

The oil consultancy, CERA, under its well-known oil historian, Daniel Yergin, issued a dismissive attack upon those who study Peak Oil (see Newsletter 72 Item 775), but has now received a withering response in the form of an Open Letter from the Editor of no less than the prestigious *Petroleum Review*, a mainstream oil industry journal (see www.aspo-ireland.org). It points out in particular that CERA's estimates of the *total* resource are not only less than sure but are substantially irrelevant when what matters is the rate of extraction. Conventional oil has supplied most to-date and will dominate all supply far into the future. Accordingly, as the Open Letter points out, the large amounts of remaining tarsand and oil shale can do little more than ameliorate the impact of the decline of conventional oil, given their slow and costly rates of extraction as well as their dwindling net energy yields. The Open Letter does not accuse CERA of ignorance or incompetence, implying that it must have motives for its stance. Consultants are in the business of being retained, and there are naturally strong vested interests, as for example the manufacturers of large luxury cars, who have their own good commercial reasons to try to deflect attention from the issue of Peak Oil. It is simply not their job to consider the future for people at large.

796. Oil & Gas Journal Database

The Oil & Gas Journal has maintained a database of oil and gas reserves by country for more than 70 years, based on a questionnaire sent out to national authorities and others, being widely regarded as an authoritative source. While, as a trade journal, it is not in a position to assess the validity of the reports it receives, the series does at least have the advantage of continuity. The 2006 database was published in December, but is naturally open to interpretation.

First is the issue of the definition of what is measured, which is particularly extreme in the case of Canada for which the Oil & Gas Journal reports reserves of 179 Gb compared with 12 Gb given by the equally reputable World Oil database. The difference is in the inclusion or exclusion of tar-sand production.

Second is the issue of unchanged reports despite production. Of the 102 countries listed, 48 are shown to have unchanged reserves from the preceding year. It is clearly implausible that new discovery should exactly match production, and it would be sensible therefore to reduce the reserves by the cumulative production for

the unchanged period. This amounts to some 26 Gb for the period 2005-2006, but is actually much more as some countries have reported the same reserves for many years : the most extreme example being Abu Dhabi that has been reporting 92.2 Gb since 1988, when it arbitrarily increased its reported reserves from 31 Gb. It has produced some 11 Gb, since 1988, which if the anomalous increase is ignored, would reduce its reserves to about 20 Gb.

The Oil & Gas Journal database reports a world reserve total of 902 Gb, but this has to be reduced to about 700 Gb to adjust for the above anomalies. Yet at the same time, the reserves are described as *Proved*, complying with strict Stock Exchange rules designed to prevent fraudulent exaggeration, and understate what will actually be produced from known fields.

The database and depletion model behind the ASPO Newsletter are being updated : a task that becomes ever more difficult as the public databases deteriorate and exhibit a wider range. A first pass has delivered the total production to 2100 of *Regular Conventional* of slightly under a rounded 1850 Gb, compared with the 2005 estimate which came in at 1857 Gb, being rounded up to 1900 Gb with the entry of the so-called *Unforeseen*. The current updated model shows a peak for *Regular Conventional* in 2005 but that for all liquids remains in 2010. The graph and table on Page 2 have been updated accordingly but will almost certainly be subject to further adjustment in what is a very much an iterative process, being far from exact science.

It would be a valuable exercise for the growing number of national ASPO organisations to dig up the details of valid production and reserve estimates in their own countries. The data are often available buried in the archives of the government offices responsible, even if the skills of a detective are required to secure the evidence.

797. Production, Supply, Extraction or Depletion

The choice of words has an important effect on the meaning of things. It is common practice to speak of oil *production* in the same way as we speak of the production of manufactured goods in a factory or the production of cash crops by farmers, which tends to obscure the fact that the so-called *Production* of crude oil is something very different. An oil well, once drilled, flows for years under its own pressure requiring little attention, but the flow comes from a finite deposit suggesting that *Extraction* might be a better word than *Production*. Since it is a finite deposit, such that the extraction is inevitably of limited duration, a sense of *Depletion* also soon imposes itself. *Supply* is still another element, generally meaning the amounts available to the consumer after adding refinery gains, which arise because the refining process actually increases the volume of the input crude oil, and subtracting war loss and net gains to storage.

Tensions have again been rising between Russia and Europe over oil supply, with the additional factor being the role of a transit country, the former Soviet republic of Belarus, which was able to use its control of pipelines in its territory as a weapon in its dispute with Russia over the pricing of oil and gas supply. If Russia had a contract to supply Europe under certain terms, which included the consent of Belarus with regard to transit, clearly the parties would be legally and morally obliged to observe the conditions. But Europe relies rather on the so-called Open Market whereby the highest bidder is in some way deemed have a fundamental right to the supply. The free-marketeers do not, and probably cannot, recognise the notion of depletion, which is in conflict with the very bedrock of their attitude and behaviour, and accordingly tend to describe any direct or indirect action by Russia to withhold supply as a hostile political action. Britain has even gone so far as to invest huge amounts of money in upgrading its nuclear weaponry with the tacit hint of rediscovering the Cold War, it being difficult to imagine other potential targets.

But in fact it makes eminent good sense for the Russian Government to reduce the rate of depletion of its oil and gas in order to conserve them for as long as possible for its own people. Ironically, it would be also doing Europe an immense favour if its actions should force Europe to reduce its excesses of consumption and take steps to develop alternative sources of energy. Depletion is imposed by Nature, and should be central to any responsible Government policy.

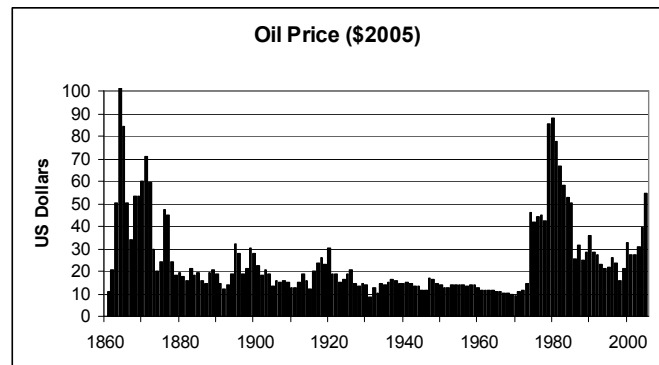
Meanwhile, President Bush in a State of the Union Address announces a new policy aimed to cut US consumption by 20% over ten years, ostensibly to lessen its dependence on *hostile regimes*. The United States currently consumes 20 M b/d, so the policy aims to reduce this to 16 Mb/d by 2017. It currently produces about 5.1 Mb/d, made up as shown in the table. So it seems doubtful if the country will succeed in reducing its dependence on *hostile regimes* : by then it may have come to recognise that Depletion imposed by Nature is perhaps the greater enemy.

Category	Production Mb/d	
	2006	2017
Regular	3.2	1.9
Alaska	0.8	0.5
Deepwater	1.1	1.3
Total	5.1	3.7

798. Oil Prices

In terms of 2004 dollars, oil prices reached an all time maximum level at \$101 a barrel in 1864, declining to a low of \$8 in 1931. They then fluctuated in the 'teens until soaring to \$46 in 1974 in response to the First Oil Shock, which arose from a decision by certain Arab countries to cut exports to the United States in response to its financial and military support for Israel which had occupied Arab lands. Prices surged again in 1980 to \$88 in response to panic buying occasioned by the fall of the Shah of Iran, before falling with economic recession to lows of \$25 in the so-called *Glut* of 1986, and \$16 in 1998.

A new chapter then opened as capacity limits, imposed by Depletion, began to influence the supply. In particular, production in the North Sea peaked and began to decline in 2001. Prices began to soar in response, reaching a new high of \$74 in August 2006. The high prices primarily represent profiteering from shortage, as actual production costs have not changed materially, but they began to impose a fall in demand as people tried to be more efficient. The sales of gas-guzzling vehicles began to fall and some of the major motor



manufacturers began to face financial difficulties and contraction. As result, prices have now weakened into the \$50 range, which probably marks a viable floor, as the much needed heavy oil production from the tar-sands of Canada becomes non-economic at prices below that level. In parallel come hints of a looming recession which could lead to exceptional falls in demand and price, which would have an unfortunate impact on investments in both Non-Conventional Oil and Renewable Energy.

The balance of supply and demand does not however tell the whole story because there is the buffer of storage, which may be raised or lowered at many levels. The perception of a looming crisis may lead to increased storage as a precaution, while a brief weakening of price may have the opposite effect. Price fluctuations themselves offer skilled traders with opportunities to profit. Furthermore large producing countries have substantial storage, included that afforded by tanker fleets, and may at times have political motives to manipulate price.

799. The Soil Association addresses Peak Oil

The Soil Association, which is an influential organisation in the United Kingdom concerned with environmental issues and especially organic farming, held a conference in Wales on January 26th and 27th at which the *Peak Oil* issue was addressed. A wide range of subjects related to the development of sustainable life-styles and farming practices, in the face of *Peak Oil* and *Climate Change*, were discussed in the most positive manner.

800. ASPO Canada

ASPO Canada has now been established under the leadership of the Rt. Hon. Ed. Schreyer, the former Governor-General, and has the following website explaining its mission and plans: www.aspocanada.ca

801. EU Seventh Research Framework Programme (FP7) call for proposal

As many in the academic world will know the European Union has launched the 7th Framework Programme to support research on a wide variety of topics across the EU. Peak Oil quite clearly fits into a number of the thematic programmes within the Coordination Heading of this most recent of the framework programmes. The University of Liverpool Oil Depletion Impact Group believes it is important that those involved in work around Peak Oil put a proposal into FP7 to help shape European Policy in this important area. If you would be interested in developing such a proposal, in either the academic or private sector, please contact Simon Snowden at the University of Liverpool at ssnowden@liv.ac.uk

Calendar - Forthcoming Conferences and Meetings

ASPO members and associates [shown in parenthesis] will be addressing the subject of Peak Oil at the following conferences and meetings. Information for inclusion in future newsletters is welcomed.

2007

February 1 Environmental Seminar, Swedish Parliament, **Stockholm** [Alekklett]
February 10 Local Community Meeting, Co. Kerry, Ireland [Campbell]
February 19 Government Conference, **Isle of Man** [Campbell]
February 21 Boole Lecture, University College, **Cork** [Campbell]
February 27 Public Seminar, **Linkoping**, Sweden [Alekklett]
March 8 Norwegian Oil Tax Office, **Oslo** [Alekklett]
March 9 Business Meeting, **Limburg**, Netherlands [Alekklett]
March 10 Minerals, Energy & the Environment, ASPO-ITALIA, **Florence**, Italy [Bardi]
March 13 Flame 2007, **Amsterdam**, Netherlands [Alekklett]
April 17 Oil & Gas Summit, **Paris** [Alekklett]
May 28-30 Planning for Oil Depletion ASPO-SOUTH AFRICA Conference **Cape Town** [Ratcliffe]
September 11-12 Geological Society bi-Centennial Conference, **London** [Campbell]
September 17-18 ASPO-6 International Conference, Ireland

NOTE

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