

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

## NEWSLETTER No. 60 – DECEMBER 2005

ASPO is 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. Independent national affiliates are in existence or formation in Australia, Canada, Egypt, France, Germany, Ireland, Italy, Netherlands, New Zealand, Portugal, South Africa, Spain, Sweden, 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.

**Newsletter:** The newsletter is currently compiled under the auspices of ASPO IRELAND, which maintains a full and searchable archive of past issues at [www.peakoil.ie](http://www.peakoil.ie).

Foreign language editions are available as follows:

Spanish: [www.crisisenergetica.org](http://www.crisisenergetica.org)

French: [www.oleocene.org](http://www.oleocene.org) (press “Newsletter”)

Newsletter communications should be addressed to ASPO IRELAND at [www.peakoil.ie](http://www.peakoil.ie)

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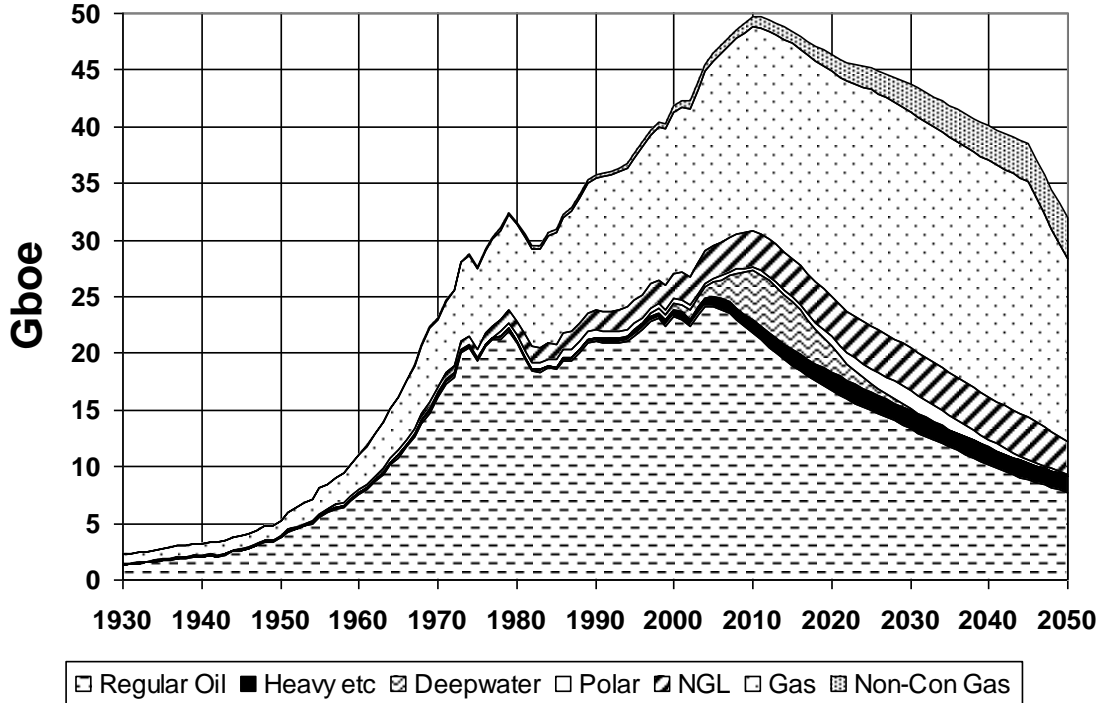
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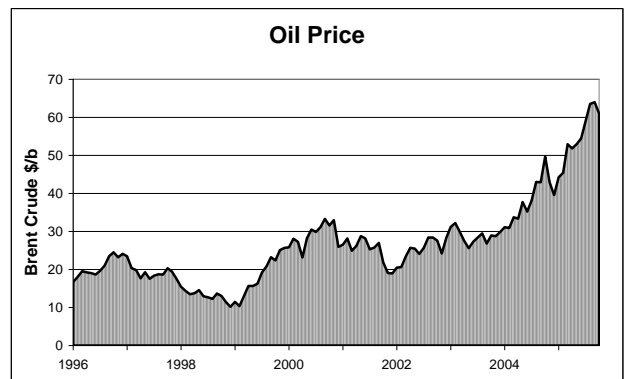
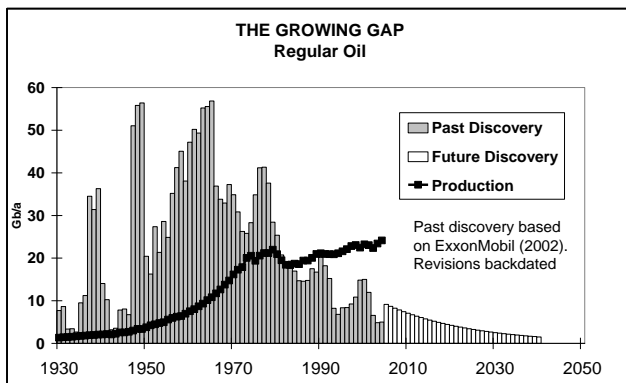
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*The General Depletion Picture*

**OIL & GAS PRODUCTION PROFILES  
2004 Base Case**



ESTIMATED PRODUCTION TO 2100								End 2004			
Amount			Gb	Annual Rate - Regular Oil					Gb	Peak	
Regular Oil				Mb/d	2000	2005	2010	2020	2050	Total	Date
Past	Future	Total		USA	4.5	3.4	2.7	1.7	0.4	200	1971
Known Fields	New			Europe	6.3	5.2	3.7	1.9	0.3	75	2000
945	775	130	1850	Russia	6.3	9.1	8.4	5.4	1.5	220	1987
	905			ME Gulf	19	20	20	20	12	680	1974
All Liquids				Other	28	28	25	17	7	675	2004
1040	1360	2400		<b>World</b>	<b>64</b>	<b>66</b>	<b>60</b>	<b>46</b>	<b>21</b>	<b>1850</b>	<b>2004</b>
<b>2004 Base Scenario</b>				<b>Annual Rate - Other</b>							
M.East producing at capacity (anomalous reporting corrected)				Heavy etc.	1.7	2.3	3	4	4	151	2021
<i>Regular Oil</i> excludes oil from coal, shale, bitumen, heavy, deepwater, polar & gasfield NGL				Deepwater	1.6	3.6	12	6	0	69	2011
				Polar	1.0	0.9	1	2	0	52	2030
				Gas Liquid	6.3	8.0	9	10	8	276	2035
				Rounding			0	1	2	2	
Revised	26/09/2005			<b>ALL</b>	<b>74</b>	<b>81</b>	<b>85</b>	<b>70</b>	<b>35</b>	<b>2400</b>	<b>2010</b>



## ASPO NEWS

**Australia :** ASPO-AUSTRALIA : see Item 652.

**France :** ASPO-FRANCE has been established with a committee composed of Pierre-Rene Bauquis, Carlos Cramez, Jean Laherrère, and Jean-Luc Wingert, opening a website [www.ASPOFrance.org](http://www.ASPOFrance.org). It will be raising awareness of Peak Oil in France and contributing more generally with analysis and commentary.

**Ireland:** Members of ASPO Ireland have made presentations to business leaders and a major bank in Dublin, to Cork University, and to the Society of Petroleum Engineers in Geneva.

**Italy:** ASPO-ITALY under Professor Bardi progresses in planning the next International ASPO Workshop for July 2006.

**Netherlands:** The Peak Oil Foundation Netherlands has issued a splendid report on depletion by Rembrandt Koppelaar – See [www.peakoil.nl/images/ponlreport.pdf](http://www.peakoil.nl/images/ponlreport.pdf)

**United Kingdom:** ASPO Secretary, Dr R.W.Bentley, has issued a penetrating Open Letter reviewing the conflicting positions within the energy modelling community: see [r.w.bentley@reading.ac.uk](mailto:r.w.bentley@reading.ac.uk)

**United States:** ASPO-USA has had a very successful conference in Denver where key speakers, including several affiliated with ASPO, addressed a packed audience of over 400, attracting much media interest. Richard Heinberg has opened an office to promote a much needed international depletion protocol.

### ***636. Automobile manufacturers awake to Peak Oil***

Executives of the Ford Motor Company have drawn attention to the difficulties facing the industry, listing Peak Oil as one of the factors. Both Ford and General Motors are in serious financial difficulties with massive debts, while Rovers, once Britain's flagship, has gone out of business.

In a keynote address to the Society of Automotive Engineers' "Global Leadership Conference at The Greenbrier," Mark Fields, Ford executive vice president and president of the Americas, noted that the auto industry faces seven specific and serious challenges, one of them being that oil production is peaking.

The SAE Greenbrier conference, first held in 1950, is an annual event attended by automakers, suppliers and business leaders.

The auto industry events of the past week [e.g., Delphi's bankruptcy] prove that the roadmaps our companies followed for 100 years are no longer valid. Business models have changed. Consumers and markets have changed. We have to change, too. From now on, only those automakers and supplier companies that find new ways to work together -- and strike down some new, uncharted paths -- are going to survive. -- Mark Fields

Fields said the auto industry faces seven specific and serious challenges:

- \* Globalization is bringing more competition to the US.

- \* The balance of power in the industry has shifted with China and India emerging as top markets.

- \* Market dynamics are changing, causing intense competition in every part of the market.

- \* Customers are becoming even more demanding.

- \* Customers' views of their automobiles are changing faster than ever, with cars increasingly becoming an expression of who people are rather than mere transportation

- \* Legislative pressure is increasing

- \* **Oil production is peaking, and concern for the environment is growing.**

We must grapple with all seven of these challenges. Guts, grit and new ideas will be the key to winning in the automotive game today.

In a separate speech at Greenbrier, Anne Stevens, Ford's newly-appointed executive vice president and chief operating officer of the Americas, stressed the critical role of innovation in moving the auto industry forward.

Noting Ford's development of the Escape and Mariner Hybrids, as well as the environmental manufacturing advances at the Rouge plant, she said that more needs to be done by all automakers in all areas such as alternative fuels, biodiesel, fuel cells and hydrogen powered vehicles.

She voiced concern to the audience, however, that with the declining number of students studying science and engineering, the future of the US auto industry runs the risk of being completely dependent on engineering knowledge residing abroad.

The building blocks of the auto industry are eroding at a time when such nations as China are gathering strength, she said, noting that:

- \* Fewer students are studying science and engineering. Enrolment in first-year engineering programs is down more than 5 percent since 2002.

- \* Electrical engineering is starting to decline, as well. Computer science is even more alarming -- with enrolment for first-year students off 31 percent from 2001.

\* China is graduating five times the number of engineers this year as in the US -- and graduating an equal number of PhDs.

\* In the US, foreign nationals earned more than 50% of masters degrees in engineering and 63% of PhDs.

\* Less than 20% of graduate engineering students in the U.S. are women, and only 10% of the engineering workforce is female. This makes it the most segregated of all professions in the U.S. today.

This does not bode well for the manufacturing base in the United States -- and that means us. If America is to maintain its manufacturing know-how, we must fill that engineering pipeline. We cannot afford to be slow to market because of an insufficient engineering base at home.

(Reference furnished by Jean Laherrère)

### **637. Rimini Conference**

A conference sub-titled *The Troubled Horizons of Oil : Sustainability or Apocalypse Soon ?* was held in Rimini on October 28-30<sup>th</sup> under the auspices of the Pio Manzu Centre. It had originally been planned to be a meeting of world leaders to address the Rimini Protocol whereby importers would agree to cut imports to match World Depletion Rate. Such a Protocol would have the effect of putting demand into balance with supply, whereby world oil prices would return to be in reasonable relationship with production cost, preventing profiteering from shortage. That in turn would allow the poor countries to afford their needs and at the same time force the consumers to reduce waste and bring in alternative energies to the extent possible. But evidently, the organising committee came under pressure from flat-earth elements to undermine that initiative, which received minimal attention.

Even so, Mr Michael Meacher, a former British cabinet minister, and Mr James Schlesinger, a former US Secretary of State, were able to stress its importance, while the Secretary General of OPEC and the oil ministers of Libya and Algeria predictably tried to convince the audience that there were no resource constraints. Speakers from the IEA, EIA and CERA positioned themselves in between. Sharon Stone, the actress, also spoke of global responsibilities, attracting much media interest.

The conference was held in the sumptuous setting of the Grand Hotel, leading one of the participants to make a comparison with the *Titanic*, whose band continued to play as the ship slipped beneath the waves. While it was indeed something of a missed opportunity in relation to the Protocol, it certainly underlined the deep political pressures and vested interests associated with what is rapidly becoming a highly sensitive, mainline subject. That in itself is, in a certain sense, promising, as the Establishment can no longer dismiss *Peak Oil* as a fringe issue, being now forced to marshal its forces of denial and obfuscation in order to distance itself from reality.

Meanwhile Richard Heinberg reports substantial progress with the Depletion Protocol (no longer named for Rimini) in the United States where an office is being opened to promote it. Only the flattest of the flat-earth community would deny that oil is a finite resource, which means that it has a Depletion Rate (annual production as a percentage of what is left). To cut demand to match depletion sounds eminently sensible. If governments could be persuaded to calculate what the Depletion Rate is, the need for such a Protocol would become self-evident. It seems indeed that the US Secretary of Energy is asking the oil companies to do so.

### **638 BP Forecast of Oil Price**

The *Daily Telegraph* of November 5<sup>th</sup> reports that Lord Browne, the Chief Executive of BP, predicts that oil prices will tumble to \$40 or below. It adds that the Director of the Petrol Retailers Association explains the statement as an effort to dissuade the British Chancellor from imposing a tax on windfall profits, prompted by fears that Britain may follow the French Government's announced plans to do so if prices remain high. Certainly, the BP Chief Executive has a responsibility to do his best to protect his shareholders' interest from new tax impositions, which would be all the greater if he himself had a holding. Lord Browne may indeed be right : prices would collapse if a serious economic recession cuts demand.

### **639. Saudi Reserves**

The New York Times of October 27<sup>th</sup> carries a report referring to statements by Mr Edward Price, the former Exploration Manager of Aramco, to the effect that claims for substantial new discovery in Saudi Arabia conflict with the evidence from previous exploration efforts undertaken while Aramco was still managed by major international companies. He further revealed that he had been informed by the Saudis that their high estimates were based on the now discredited USGS study of 2000, and not new work of their own.

#### 640. Country Re-Assessment – Syria

The Newsletter has now covered most major producing countries, so it is perhaps time to update earlier assessments, starting with Syria, the first to be covered (Issue No 17 of May 2002).

##### Syria

Syria, which covers an area of 186 000 km<sup>2</sup> supporting a population of 18 million, lies on the northern margin of the Arabian Peninsula, bordering Turkey, Iraq and the Lebanon. A narrow Mediterranean seaboard gives way to mountain ranges rising to almost 3000m, which pass eastwards into rocky, arid plains, known as the Syrian Desert. The Euphrates River passes through eastern Syria before entering Iraq, while the Orontes River flows through the western part of the country.

It is an ancient land that has been populated for some six thousand years, attracting many biblical references, before becoming part of the Greek and Roman Empires, when it enjoyed a cultural flowering. Its dominion then extended far outside its present borders to include what is now Jordan, Israel, Palestine and the Lebanon. In the 7<sup>th</sup> Century it was invaded by Arab powers, emanating from Baghdad and Turkey. It also attracted the attention of Christian Crusaders wanting to control the shrines of Jerusalem. During these times, it experienced much internal factional discord, including that springing from the eternal Sunni-Shi'ite religious divide.

It was incorporated into the Ottoman Empire in 16<sup>th</sup> Century, before falling to the Egyptians in 1831. Further religious conflicts ensued with the rival Christian claims of the Maronites and the Druse, not to forget the role of Jewish merchants. As part of the Ottoman Empire, Syria found itself allied to Germany in the First World War, being invaded by British and French forces in 1917.

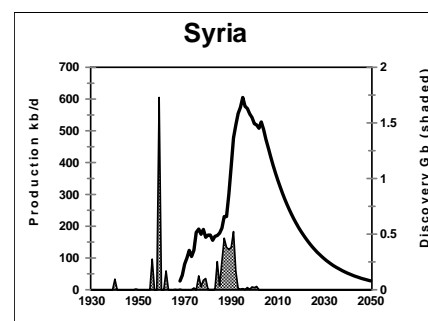
The defeat of the Ottoman Empire led to the break up of the Middle East, including Syria, with the creation of new political administrations under French and British mandates, blessed by the League of Nations. After further disputes, Syria and the Lebanon fell firmly under French control, while rival factions within the country sought more independence.

British and Free French forces again occupied the territory in the Second World War before withdrawing in 1946. The two countries then became fully independent States facing internal strife, bloodless coups and military dictatorship. The tensions were further inflamed by the Israeli subjugation of the Palestinians, prompting Syria to forge a brief alliance with Egypt in 1958 in the hope of forming a pan-Arab State. This entity had Ba'athist sympathies, being an Arab variant of Communism. But the project failed in 1961, although a Ba'athist regime returned to government in 1963, proposing an alliance with Iraq. General Hafez al-Assad, Commander of the Syrian Air Force, came to power in 1970, as a strongman enjoying much popular support. Conflicts with Israel added to the difficulties leading both to the loss of territory and prompted the occupation of the Lebanon from 1976. General Hafiz al-Assad died in 2000, to be succeeded by his son, Bashar. His regime is now under pressure from the United States, being accused of complicity in the assassination of Rafiq Hariri, the President of the Lebanon on February 14<sup>th</sup> 2005, leading to the withdrawal of Syrian forces from that country. Some commentators see the assassination as a contrived incident aimed to pave the way for the establishment of a puppet regime, possibly accompanied by military action, to strengthen US control of key Middle East export pipelines, help subjugate Iraq and improve Israel's position.

In geological terms, most of the country falls on a shallow platform where prospects are confined to possible Palaeozoic plays, likely to be, if anything, gas prone. Its northeast, however, extends into the prolific Mesozoic Middle East oil belt. The first significant oil find was made there in 1940, to be followed, after the Second World War, by several others, including Suwaidiyah in 1959, which is ranked as a giant field with an ultimate recovery of about 1.5 Gb. Shell has had a long-standing presence in the country.

SYRIA		Regular Oil
<b>Population M</b>		18
<b>Rates Mb/d</b>		
Consumption	2004	0.26
per capita b/a		6
Production	2004	0.5
	Forecast 2010	0.35
	Forecast 2020	0.18
Discovery 5-yr average Gb		0.01
<b>Amounts Gb</b>		
Past Production		0.18
Reported <i>Proved Reserves*</i>		2.5
Future Production - total		2.8
	From Known Fields	2.5
	From New Fields	0.3
Past and Future Production		7.0
Current Depletion Rate		6.1%
Depletion Midpoint Date		2000
Peak Discovery Date		1966
Peak Production Date		1995

\*Oil & Gas Journal



Although exploration and production were somewhat inhibited by the difficult political climate, as many as 300 wildcats have been drilled, suggesting that most of the large promising structures have been tested. Wildcat drilling peaked in 1992, before falling to an average of no more than six a year over the past five years. On this basis, exploration is set to end around 2020, with a total of about 350 wildcats. There remains some potential for the deep Palaeozoic play, sourced by the Silurian, but if confirmed, it is likely to be gas-, rather than oil-bearing. The country has no recognisable *non-conventional* potential.

Production started in 1968, peaked in 1995 and is now declining at about 6% a year. Reported reserves of 2.5 Gb are tentatively accepted here, although their credibility is undermined by the fact that they have been unchanged for eleven years. Important, currently closed, pipelines run through the country from Kirkuk in Iraq to the Mediterranean. They are likely to resume importance if and when stability returns to Iraq, giving Syria the role of a transit country, carrying serious political implications.

It is difficult to assess how Syria will fare during the Second Half of the Age of Oil. It has certainly had a volatile history, yet its people have somehow survived and thrived despite every adversity. It is vulnerable because it lies on important Middle East export pipelines, which Western consuming countries may seek to control, but if spared invasion, its people will probably find a future supported by modest trade and agriculture as they have in the past.

### **641. Strange Times**

We seem to be living in strange times giving a certain intangible sense of foreboding. Oil prices have temporarily moderated, thanks in large measure to Europe's willingness to ship as much as 2 Mb/d of refined product from storage to the United States. This gesture was made in response to the US hurricanes, but will now end, as Europe's own growing needs clearly have priority. Accordingly, we can expect oil prices to resume their heady climb in the weeks and months ahead. Despite heroic official comments to the contrary, and a surging stockmarket based on questionable intrinsic values, signs of a looming slump in the economy do appear to be building, being predictably accompanied by rioting in France and Britain as poor ethnic minorities demonstrate their resentment. The dole queues in Germany lengthen. Turmoil and hunger stalk much of Africa. Latin America seems to be moving towards some new form of union to preserve its resources and restore meaning to the word sovereignty. Even in the United States, a Citizen's Resolution was passed in the State Capital Building of Vermont on 11<sup>th</sup> November, calling for the State to secede from the Union, as is its Constitutional Right, last exercised by Carolina in 1861. In Britain, Mr Blair suffered a withering defeat in Parliament over anti-terrorist legislation: some politicians evidently concluding that it was his support for the invasion of Iraq that gave the terrorist threat in the first place. In Iraq itself, resistance to the occupation continues with random bombings, and a rising death toll. Probably some 500 000 innocent people have now died as the direct or indirect consequences of the invasion. Tourist hotels in Jordan have also been victims of bombing. Syria is under pressure from the United States, being accused of complicity in the assassination of the Lebanon President (see Item 640).

In isolation these events may carry little significance but put together they do seem to deliver a certain sense of foreboding that things were not quite what they were before the spectre *Peak Oil* presented itself as an imminent threat. Demonstrators under *Peak Oil* banners are to march in London on December 3<sup>rd</sup>.

### **642. Kuwait Confession**

Kuwait's reported reserves have been suspect since it announced an implausible 50% increase in 1985. It now begins to admit to depletion according to the following article. It is no surprise that production from the Burgan Field, found in 1938, is declining with age. In earlier years, it was estimated to hold 60 Gb, of which probably about half has now been extracted. The next largest field, Raudhatain is much smaller, having about 9 Gb. So, adding net production, once Burgan declines, sounds next to impossible.

It is difficult to explain the implausible increase in reported reserves in 1985. Prior to the increase, it reported reserves of 64 Gb, having produced 22 Gb, meaning that the *Original Reserves* were 86 Gb, which is close to the 90 Gb it reported in 1985. So, the simplest explanation is that it changed from reporting *Remaining* to *Original* reserves, which would also explain why the subsequent estimates have not declined in parallel with production.

But there is an alternative explanation in terms of improved recovery. If the 86 Gb reported as found by 1984 was based on a traditional 30% recovery factor, then the oil-in-place would have been 286 Gb. If they then assumed a 40% recovery, which would not be unreasonable, that would lift discovery to 114 Gb, which, with 22 Gb having been produced, leaves reserves of 92 Gb, as indeed they reported in 1987. Total production through 2004 is 32 Gb, meaning on this basis that present reserves would be 82 Gb, which is still less than the currently claimed 99 Gb.

Another technical paper (Azim, AAPG 2005) reports that the Lower Burgan Reservoir provides 74% of North Kuwait's production and has a recovery factor of 44%, which it is hoped to improve further. Some of Kuwait's northern fields straddle the ill-defined border with Iraq, which are evidently now receiving new attention. In the absence of unitization agreements, Kuwait may be able to take Iraq's oil simply by pumping harder, which indeed was one of the difficulties that led to the Gulf War. It might be one way to improve recovery. In addition to the issues of reserves and recovery factor, is the question of production rate. Securing high recovery often becomes more difficult implying a lower production rate, meaning that it may become ever harder to hold the current rate.

Besides, the Emir of Kuwait may have grandchildren to whom he might like to leave an inheritance. If so, he would have every good reason to produce at a low rate for longer than puff it all away for the benefit of his foreign customers. The only difficulty here is that the rest of his fortune is probably already on Wall Street, meaning that he has every good reason to comfort the market.

### **Kuwait's Burgan Oil Field, World's 2nd Largest, Is `Exhausted'**

2005-11-10 03:29 (New York)

By James Cordahi and Andy Critchlow

Nov. 9 (Bloomberg) -- Kuwaiti oil production from the world's second-largest field is "exhausted" and falling after almost six decades of pumping, forcing the government to increase spending on new deposits, the Chairman of the State oil company said. The plateau in output from the Burgan field will be about 1.7 million barrels a day, rather than as much as the 2 million a day that engineers had forecast could be maintained for the rest of the field's 30 to 40 years of life, said Farouk al-Zanki, Chairman of State-owned Kuwait Oil Co. Kuwait plans to spend about \$3 billion annually for the next three years to expand output and exports, three times the recent average.

To boost oil supplies, "Burgan by itself won't be enough because we've exhausted that, with its production capability now much lower than what it used to be," al-Zanki said during an interview in his office in Ahmadi, 20 kilometers south of Kuwait City. "We tried 2 million barrels a day, we tried 1.9 million, but 1.7 million is the optimum rate for the facilities and for economics."

Persian Gulf oil producers, which supply about a fifth of world demand, are rushing to find new reserves and build more pipelines and export terminals to compensate for declining output from older reservoirs. Any delay in replacing supplies may push oil prices higher and slow economic growth, the International Energy Agency said in a report this week.

To be sure, the plateau in supply if achieved would be higher than a projection from the IEA. This week the Paris-based group said output from the Greater Burgan area will increase from 1.35 million barrels a day in 2004 to 1.64 million a day in 2020, before falling to 1.53 million a day in 2030. The field now pumps between 1.3 million and 1.7 million barrels a day, al-Zanki said.

#### **Sustainable Supply?**

The debate over the sustainability of Middle East oil supplies has gained pace this year, after investment banker Matthew Simmons published "Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy." In the book, he asserted the practice of injecting water into Saudi fields may lead to rapid production declines. Saudi officials rejected the charge. Brought into production in 1948, Burgan accounts for more than half of Kuwait's 96.5 billion barrels of oil reserves, or 55 billion barrels. Only Saudi Arabia's Ghawar oilfield, about 500 kilometers (313 miles) to the south, is bigger. Benchmark New York oil futures have tripled in price during the last four years to a record \$70.85 on Aug. 30 because countries such as Kuwait and Saudi Arabia haven't invested enough in expanding production capacity to keep pace with faster-than-expected demand from countries such as China, India and the U.S. Kuwait last month pumped 2.5 million barrels a day, equivalent to 3 percent of global demand, according to Bloomberg data. That's down from a peak of almost 3 million barrels a day in 1972, according to the Arab Oil & Gas directory. "Kuwait's oil industry requires significant investment and needs international oil companies to help kick-start production capacity increases," Colin Lothian, senior Middle East energy analyst at Wood MacKenzie Ltd., an Edinburgh-based oil industry consultant, said in a telephone interview. Burgan on its own had enough reserves to support 2 million or 3 million barrels of daily output, but those have already been produced, al-Zanki said in the interview two days ago. The reserves are declining and need to be supplemented with other reservoirs, he said.

#### **Revival Targeted**

The family-ruled Emirate plans to increase production capacity by about 18 percent to 3 million barrels a day by the end of the decade from about 2.55 million now, and to at least 4 million by 2020.

Oil consumers will be more reliant on Middle Eastern supplies in coming years and vulnerable to higher prices and slower economic growth should investments be delayed, the IEA, an adviser to 26 consuming nations, said in an annual outlook released on Nov. 7.

Petrofac Ltd. and rivals SK Engineering & Construction Co. won two contracts worth in more than \$1.6 billion this year to upgrade and refurbish 20 plants that separate natural gas from oil ready for export in northwestern Kuwait. That work is in preparation to allow international oil companies to develop four

oil fields near the border with Iraq. "You need to develop more reserves in order to support the future target," said al-Zanki, who was appointed Kuwait Oil's chairman last year. Kuwait Oil is the country's state-owned monopoly oil and gas producer. In a 10-year-old plan known as Project Kuwait, the emirate may invite companies such as Exxon Mobil Corp., Royal Dutch Shell Plc and BP Plc to invest about \$8.5 billion to almost double output at the emirate's northern fields to 900,000 barrels a day by 2025. The project would be the first time since the 1970s that foreign companies operate Kuwaiti oilfields.

*(References furnished by John Lyles and Franco di Cesare)*

### **643. Saudi Wealth**

It is reported that King Fahd's widow is suing his estate from her bespoke London home for 50 billion dollars as her share of the inheritance. Most of the King's fortune was accumulated during times of relatively low oil price, so future royal widows will have much more to look forward to, even if they have to share it amongst each other. Flat-earth economists may welcome this as new liquidity, possibly stimulating the jewellery trade – gold may indeed stage a come-back.

### **644. Voices of Sense in Washington**

Senator James Schlesinger, a former head of the CIA and a Secretary of State, has presented to the Senate Foreign Affairs Committee a virtually identical slide to the *Growing Gap* which opens this Newsletter.

Congressman Roscoe Bartlett is likewise doing a splendid job, telling an audience in Denver that "just because he was a Republican did not mean that he was an imbecile" - or words to that effect. James Woolsey, the former Director of the CIA, has also urged his country to cut its oil demand.

A Resolution (#507) has been passed in the House of Representative urging the government "to address the inevitable challenges of *Peak Oil*". It is gratifying to see the use of this term, which seems to vindicate the endeavours of the Association for the Study of *Peak Oil & Gas* ("ASPO")

It begins to look as if the United States, which in recent years has not been everyone's favourite country, may yet again marshal its well-known strengths and dynamism to plan a sensible policy for the Second Half of the Age of Oil. Jimmy Carter, the former President, also urges a new approach, as the following extract from his latest book, *Our Endangered Values: America's Moral Crisis*, makes plain.

In recent years, I have become increasingly concerned by a host of radical government policies that now threaten many basic principles espoused by all previous administrations, Democratic and Republican. These include the rudimentary American commitment to peace, economic and social justice, civil liberties, our environment and human rights. Also endangered are our historic commitments to providing citizens with truthful information, treating dissenting voices and beliefs with respect, state and local autonomy and fiscal responsibility.

At the same time, our political leaders have declared independence from the restraints of international organizations and have disavowed long-standing global agreements — including agreements on nuclear arms, control of biological weapons and the international system of justice.

Instead of our tradition of espousing peace as a national priority unless our security is directly threatened, we have proclaimed a policy of "preemptive war," an unabridged right to attack other nations unilaterally to change an unsavory regime or for other purposes. When there are serious differences with other nations, we brand them as international pariahs and refuse to permit direct discussions to resolve disputes.

Regardless of the costs, there are determined efforts by top U.S. leaders to exert American imperial dominance throughout the world. These revolutionary policies have been orchestrated by those who believe that our nation's tremendous power and influence should not be internationally constrained. Even with our troops involved in combat and America facing the threat of additional terrorist attacks, our declaration of "You are either with us or against us!" has replaced the forming of alliances based on a clear comprehension of mutual interests, including the threat of terrorism.

Another disturbing realization is that, unlike during other times of national crisis, the burden of conflict is now concentrated exclusively on the few heroic men and women sent back repeatedly to fight in the quagmire of Iraq. The rest of our nation has not been asked to make any sacrifice, and every effort has been made to conceal or minimize public awareness of casualties.

Instead of cherishing our role as the great champion of human rights, we now find civil liberties and personal privacy grossly violated under some extreme provisions of the Patriot Act.

Of even greater concern is that the U.S. has repudiated the Geneva accords and espoused the use of torture in Iraq, Afghanistan and Guantanamo Bay, and secretly through proxy regimes elsewhere with the so-called extraordinary rendition program. It is embarrassing to see the president and vice president insisting that the CIA should be free to perpetrate "cruel, inhumane or degrading treatment or punishment" on people in U.S. custody. Instead of reducing America's reliance on nuclear weapons and

their further proliferation, we have insisted on our right (and that of others) to retain our arsenals, expand them, and therefore abrogate or derogate almost all nuclear arms control agreements negotiated during the last 50 years. We have now become a prime culprit in global nuclear proliferation. America also has abandoned the prohibition of "first use" of nuclear weapons against non-nuclear nations, and is contemplating the previously condemned deployment of weapons in space.

Protection of the environment has fallen by the wayside because of government subservience to political pressure from the oil industry and other powerful lobbying groups. The last five years have brought continued lowering of pollution standards at home and almost universal condemnation of our nation's global environmental policies.

Our government has abandoned fiscal responsibility by unprecedented favors to the rich, while neglecting America's working families. Members of Congress have increased their own pay by \$30,000 per year since freezing the minimum wage at \$5.15 per hour (the lowest among industrialized nations).

I am extremely concerned by a fundamentalist shift in many houses of worship and in government, as church and state have become increasingly intertwined in ways previously thought unimaginable.

As the world's only superpower, America should be seen as the unswerving champion of peace, freedom and human rights. Our country should be the focal point around which other nations can gather to combat threats to international security and to enhance the quality of our common environment. We should be in the forefront of providing human assistance to people in need.

It is time for the deep and disturbing political divisions within our country to be substantially healed, with Americans united in a common commitment to revive and nourish the historic political and moral values that we have espoused during the last 230 years.

*(References furnished by Chris Sanders and Robert Hirsch)*

#### **645. More confusion from the International Energy Agency**

The IEA has recently published a report *From Resources to Reserves* that seeks to demonstrate how new technology will add reserves. It illustrates this notion with a graph (Fig 1-20) depicting past apparent "reserve growth" in the North Sea, implying that yet-to-be-identified new technology will add another tranche. Jean Laherrère (see [www.oilcrisis.com](http://www.oilcrisis.com)) explains how not only has a mistaken scale been applied to the graph by the IEA but that past production was controlled by the pattern of earlier discovery, and not any particular technological development.

It is understood that the European Union is losing confidence in the information furnished by the IEA and is to establish a new unit of its own to address *Peak Oil* although no doubt the curtain provided by the IEA will continue to be useful, shielding those wishing to stand behind it.

#### **646. Sweden's new policy to wean itself of oil dependency**

The Prime Minister of Sweden has announced a new policy aiming severely limit the use of oil for heating and transport by 2020, referring to the work of ASPO at Uppsala University. There are plenty of trees in Sweden, and neighbouring Finland is building new nuclear capacity.

*(Reference furnished by Prof. Aleklett)*

#### **647. Vituperation**

The following website alleges dishonesty and incompetence by the Editor of this Newsletter along with schizophrenic and Fascist tendencies.

<http://peakoildebunked.blogspot.com/2005/10/122-colin-campbell-wrong-again.html>.

This avalanche of abuse was apparently triggered by reporting a reassessment that moved the peak date from 2007 to 2010. The word *Peak* possibly confuses those ignorant of the subject. It is not a Mount Everest but merely the maximum value on a gentle curve. Additional confusion is introduced by the several categories of oil, each depleting at different rates. The present assessment indicates that *Regular Conventional Oil* was at peak in 2004, whereas the profile for "all liquids", as compiled from individual country evaluations (excluding refinery gains), is as follows:

2000	74.2 Mb/d	2006	81.7 Mb/d	2012	82.3 Mb/d	2018	71.9 Mb/d
2002	73.4	2008	83.6	2014	79.4	2020	68.6
2004	79.6	2010	84.5	2016	75.9	2022	65.0

It is obvious that a fairly minor change in the input, or the modelling assumptions, can shift the maximum value (*Peak*) by a year or two, one way or the other, while the general position remains clear. We know that the estimates are wrong, given the appallingly unreliable public data. The questions are *By How Much?* and *On What Evidence?* If we have missed the impact of the Cretaceous in the Sudan or the delta fronts of Sumatra, please let us know. It is worth noting in passing that were Middle East production to rise higher

than presently forecast, it would simply give a higher and possibly earlier peak followed by a steeper subsequent decline.

In a separate incident, Jack Zagar, giving a talk on *Peak Oil* to the Society of Petroleum Engineers in Geneva, found himself facing a member of the audience who accused ASPO of being a political conspiracy to justify the invasion of Iraq.

#### 648. Britain's new energy policy

Mr Blair's Government can no longer deny the decline of Britain's own oil and gas, and now announces that it is considering re-building the nuclear power supply. It speaks of the distant sources of oil and gas being "politically unstable" without admitting that that in part is due to its own actions in the Middle East, and still failing to grasp that the problem arises primarily from depletion. The nuclear option will not be popular with many people, and it is indeed a difficult decision. Major economic recession, prompted by the high cost and growing shortage of oil and gas, may arrive long before new nuclear capacity can deliver, remembering that the construction itself consumes much conventional energy. Deep and prolonged economic recession may lead to radical new ways of life in which the demand for energy will decline.

#### 649. Energy Descent

Now that *Peak Oil* is being widely recognised, attention turns to reactions and responses both at national and, more important, local levels. Rob Hopkins, who pioneered the Energy Descent Action Plan and was initiator of June's *Fuelling the Future Conference*, has established a new website, **Transition Culture - an evolving exploration into the Head, Heart and Hands of Energy Descent**. It is an outlet for posting findings from research, useful resources and links. The site is also home to a wealth of book reviews, articles and other ephemera, including a .pdf version of the Kinsale Energy Descent Action Plan. If you are interested in creative strategies to peak oil and to community led pathways down from the peak, you will find [www.transitionculture.org](http://www.transitionculture.org) an indispensable companion on your journey

#### 650. Review of the IEA World Energy Outlook

Jörg Schindler and Werner Zittel of LB-Systemtechnik in Munich offer the following review of the IEA's latest World Energy Outlook

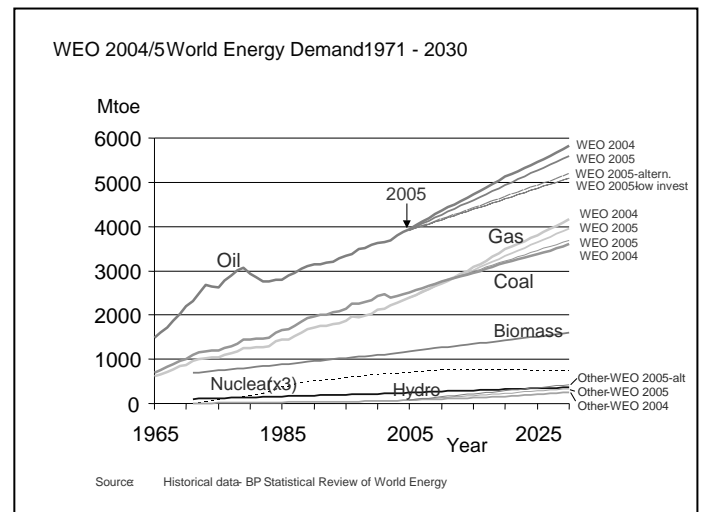
Every second year, the International Energy Agency (IEA) has published an outlook forecasting the development of the world's energy consumption over the next 20 to 30 years. The last "World Energy Outlook 2004" (WEO 2004) forecasted a strong increase of energy and oil consumption with a growth rate of about 1.6% p.a. Breaking the usual biannual rhythm, the IEA has now published an extra issue for 2005, covering the period to 2030. The reason for this unexpected extra publication probably was the unprecedented rise of oil prices during the last year causing much public concern.

The **Reference Scenario** describes what is depicted as the most probable development of energy markets until 2030 as seen by the IEA. In addition, two alternative scenarios are considered, a **Low Investment Scenario** (if investment in upstream activities is much lower than expected) and an

**Alternative Scenario** (if policy measures are introduced to cut energy demand). For details see Figure 1.

These scenarios include also renewable energy. Solar, wind and geothermal energy will increase their contribution in the **Reference Scenario** until 2030 to provide 2% of primary energy supply, whereas under the **Alternative Scenario** they increase their contribution by 30%, with a share of 2.6%.

In the face of the expected growing demand for oil and gas until 2030, the IEA raises the question of where the necessary additional upstream capacity could come from, seeing the potential for a considerable increase in the Middle East and North Africa. According to the IEA, these countries still hold large reserves which are sufficient to meet the expected future demand. But there is a caveat: the known reserves are limited meaning that growth depends on large new discoveries. If they fail to materialise, world oil production would peak before 2030. In other words, contrary to the initial statement, known reserves in these countries are not a sufficient basis for the projected production increases. Nevertheless, the impression is given that the projected capacity increases are feasible. The



**Alternative Scenario** discusses the option of reducing the demand growth by political measures. This is seen by the IEA as being possible and desirable, although the effect on demand is minimal, leading to a reduction of less than 10%.

According to the IEA, energy consumption in the oil and gas producing countries of the Middle East and North Africa will rise as a consequence of the growing population. However, this additional demand pressure is expected to be an incentive to increase production, which with a strange sense of logic is depicted as increasing the net export capacity of these countries - a conclusion which probably will not be shared by many.

A necessary precondition for expanding the production in these countries is increased investment in exploration and production. According to the report, a doubling of present budgets is called for.

After describing the conditions for supply expansion, the IEA addresses possible problems. It suggests that if these countries are unable or unwilling to increase their investments, it would lead to the entry of foreign investment.

A second problem mentioned by the IEA is that all scenario calculations and conclusions are based on data that are completely unreliable: *Uncertainties about just how big reserves are and the true costs of developing them are casting shadows over the oil market outlook and heightening fears of higher costs and prices in future.*

Rather unexpectedly at this point, the IEA casts doubts on the feasibility of increasing oil supplies in the future. However, instead of addressing the problem of inadequate or uncertain reserves, it concentrates on the problem of insufficient investments.

The IEA gives much emphasis to the argument that increased production, involving huge investments, is in the interest of the oil producing countries in the Middle East and North Africa. It is argued that higher investments will result in higher overall income for these countries. This result is achieved by assuming different oil prices for the alternative cases of large and small capacity extensions (see figure 2). The assumed price levels leading to this result are far below present oil market prices and are completely arbitrary. Obviously, the IEA seeks to try to convince the OPEC countries that huge investments in oil exploration and production are in their best own interest.

It remains to be seen whether these arguments will convince the OPEC countries. One should be sceptical, however, in view of the experiences the OPEC countries had in the last years in which they saw prices rise far beyond the “automatic price band” of \$22-\$28, a development which did not lead to a shrinking of oil demand and had no dramatic effects on the world economy, contrary to the predictions of western sources. By the way, presently, none of the countries seems to be able to increase supplies to control crude oil prices.

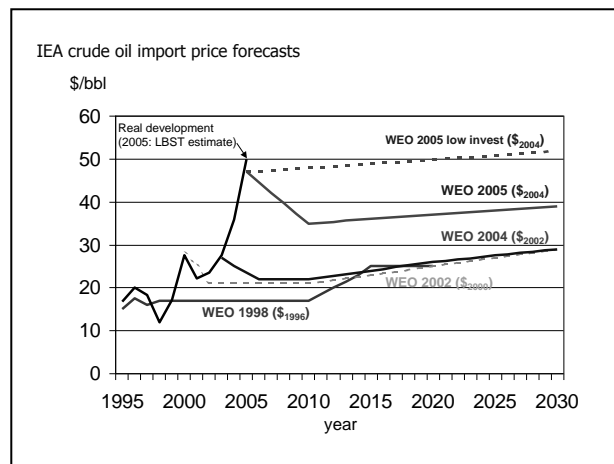
The question remains why did the IEA publish this new World Energy Outlook just one year after the last report. Is it possible that it believes that its scenarios are so unlikely that only massive arguments put forward in this additional report could create the necessary preconditions?

The key messages of the World Energy Outlook 2005 are:

- The oil reserves of the world are sufficient to supply a considerable demand growth until 2030, subject only to the necessary investments to so secure. If this can be achieved there will be no “peak oil” problem before 2030.
- The main difference from the preceding reports is the expectation of a considerable increase in oil import prices until 2030. From the chosen wording it can be concluded that the IEA regards not the **Reference Scenario** as the most probable, but the **Low Investment** scenario which projects an increase of oil import prices up to \$52/barrel by 2030.
- Renewable energies will not reach a significant market share within the next 25 years.

The negligible role attributed to renewable energies by the IEA even in the long term is an obvious attempt to influence the energy policy of governments, a position which meets strong criticism, especially in Europe. Why does the IEA not investigate what effect an investment level as proposed for the oil industry would have if applied to renewable energies? The answer points to vested interests influencing the IEA’s findings.

Fundamental and - according to our opinion - much more important questions are not addressed by the IEA, especially:



- Are oil production increases in the Middle East countries and North Africa really possible even when the investment is doubled? This is rather doubtful with regard to the size, structure, age, and the depletion status of the producing fields.
- Is it really in the long term interest of oil producing and consuming countries still to increase the production? This would result in a higher maximum production which would necessarily be followed by a steeper decline. Because the ultimate recoverable amount is a fixed quantity, only the production profile over time can be influenced. The inevitable transition from oil to renewable energies will not be made easier, and the energy problems will be enhanced.

Possibly, these questions are not addressed by the IEA because they would trigger quite a different discussion.

### **651. Oil Depletion Protocol**

Interest in the Oil Depletion Protocol (no longer named for the Rimini Conference) is gaining ground, with new interest in Canada (see CACOR [www.cacor.ca](http://www.cacor.ca))

### **652. ASPO-Australia Reports**

As the following report confirms, ASPO-AUSTRALIA is up and running :

During a busy visit to Perth and Brisbane, ASPO President, Prof Kjell Aleklett found time to launch ASPO-Australia at a media conference held at the Royal Automobile Club of Western Australia.

Convenor, Bruce Robinson, said that ASPO-Australia was building a network involving interested professionals working in the many areas affected by peak oil. It was also forming a number of working groups to help people concentrate on the impact of peak oil in specific areas, and on the relevant mitigation and adaptation strategies.

Sectors covered so far include finance industry, social services, construction industry, health, conservation movement, media and communications, remote and indigenous communities, transport, economics and oil & gas industry, as well as groups in most major cities. The website is running well and expanding ([www.ASPO-Australia.org.au](http://www.ASPO-Australia.org.au)).

During his visit, Prof Aleklett gave three major and well-attended public lectures, at the University of Western Australia, to the Australian Institute of Energy in Perth, and to the Brisbane Institute. He also gave a number of briefings to public servants, politicians, the Royal Automobile Club of WA and senior business people and energy professionals. The audiences included three WA Cabinet ministers, two shadow ministers, and a number of other members of Parliament. Modest but nationwide print media and radio coverage was obtained. Coincidentally, our national TV network also broadcast a segment on Peak Oil, featuring a local oil company CEO who suggests Peak Oil is here or very close.

( [www.abc.net.au/catalyst/stories/s1515141.htm](http://www.abc.net.au/catalyst/stories/s1515141.htm))

### **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.

December 1	Minergie, <b>Bern</b> , Switzerland [Zittel]
December 6	Peak Oil. CEMUS, <b>Uppsala</b> University, Sweden [Campbell]
December 14	Ireland in the Second Half of the Age of Oil, ICA, <b>Schull</b> , Ireland [Campbell]
<b>2006</b>	
January 19	Ireland in the Second Half of the Age of Oil, Inst Transport, Dublin [Campbell]
April 2-4	Ireland's Response to Peak Oil, <b>Dublin</b> [Campbell],
April 20-24	Peak Oil, Limerick University, <b>Limerick</b> , Ireland [Campbell]
(Information for inclusion in future newsletters is welcomed).	

### **Note**

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