

NORTH AMERICA ENERGY CONFERENCE

**Sponsored by IAEE/USAEE/AMEE/CAEE in the
Camino Real, Mexico City, on 19/21 October 2003**

FIRST PLENARY SPEAKERS:

*MEXICO: Adrian Lajous, President, Petrometrica;
ex-Pres, PEMEX*

*USA: Michehl Gent, Pres N.America Electricity
Reliability Council*

*CANADA Felix Kwamena, Director, Energy Infrastructure,
Govt of Canada*

REST OF THE WORLD: Paul Tempest; CEO Windsor Energy

ENERGY SECURITY IN AN INSECURE WORLD

Paul Tempest*

My instructions today are to place North American energy issues in a global context with particular relevance to the Middle East. I intend to focus on the prospects of the international trade in oil and natural gas over the next twenty years and the likely political consequences of the most probable shifts in the pattern of global demand and supply.

In previous visits to Mexico, I have spoken for the British national interest, for Shell International and at the World Petroleum Council AGM*. Now I am free of affiliation and speak my own personal view: *bis-sarahat min galbi*, as it would be put in Arabic – *frankly and from the heart*.

**General Manager of the Qatar and Dubai Currency authority, 1970-71; Bank of England adviser on the Middle East, Energy and North Sea finance 1973-81; 2-year secondment to British Gas to report on external sources of long-term new gas supply for the UK 1981-83; World Bank Energy Department, Washington DC (oil lending guidelines; chair of West Africa/Europe gas project; new gas development in Trinidad and S Korea) 1983-5; Head of International Energy Division (PAE) in Shell International 1985-91; Director General of the World Petroleum Council and Congresses 1991-99; President of the IAEE, 1984; Vice-President of the BIEE since 1995; CEO of Windsor Energy Group and Senior Consultant of MEC International, London since 2000. See Annex A for books, publications and recent reports.*

GLOBAL ENERGY IMPORT DEMAND IS RISING SHARPLY

The International Energy Agency, World Bank and many others expect global energy demand to increase by at least 60% over the next 20 years. A sustained population rise in the developing world, swift urbanisation and widening expectations of enhanced mobility will be the bedrock of this rising global demand for energy. Recession and credit collapse may result in local and temporary downturns, but the global numbers appear robust. Moreover, contrary to general opinion a decade ago, US and European energy demand has resumed a vigorous upward trend.

With coal constrained by environmental considerations and nuclear power limited by concerns over safety and weapons proliferation, the bulk of increasing global demand will have to be met within this period by new oil and natural gas production, much of it imported (see Table 1). Alternative energy including hydro-electricity will bring little change to the global energy mix within the period.

INTENSE COMPETITION FOR NEW OIL AND GAS IMPORTS

Four main groupings will be in conflict to secure additional imports of oil and gas (see Table 2):

- **THE UNITED STATES**, currently importing 11 mbd net of oil is expected to add 8-12 mbd to oil imports. Rising natural gas demand may be met by new massive pipeline imports from Canada (and possibly also Mexico) and imported LNG and other gas liquids.
- o **EUROPE** currently importing net 10 mbd of oil pins its hopes on new pipeline supply from Russia. Its high dependence on Russian gas imports may be increased if adequate pipeline infrastructure can be installed and updated in time.
- **SOUTH-EAST ASIA**, led by China, Japan and South Korea will provide the strongest impetus to oil and gas development in other Asian states, notably the leading Gulf producers of oil and gas.
- **THE ADVANCED DEVELOPING COUNTRIES** will face massive step-jumps in economic activity, much of which can only be sustained by increased oil imports.

THE BULK OF NEW OIL AND GAS SUPPLY WILL HAVE TO COME FROM THE GULF STATES

The Gulf producers hold 65.4% of proved global oil reserves and 36.0% of proved global gas reserves. The Russian Federation holds a further 30.5% of the gas total. (See Table 6). Much of the rest involves higher average costs of extraction and often more difficult access to markets.

“THE NUMBERS DO NOT ADD UP ! “

A best guess of oil import demand in 2025 (78-92 mbd) and the likely availability of oil exports (56-68 mbd) leaves a massive shortfall of 10-36 mbd. (see Table 5).

A FREE OR A MANAGED MARKET?

US complacency is based on the assumption that the economic weight of the United States (25% of global energy consumption), operating on a free open world market for oil and an emergent spot market for natural gas, will ensure that it can outbid its competitors for the available supply. The USA would thereby be in a strong position to redirect the flow of oil and gas to the United States whenever this is needed and, with the flexible use of the US Strategic Petroleum Reserve and the assistance of a strong naval if not military presence in the Gulf, will be well-placed to manage the global oil and gas market to its own advantage.

This assumption ignores the realities of the Asian market today and also the growing economic and political ties between the leading Gulf producers and the leading Asian consumers led by China, Japan and South Korea.

If large volumes of oil and LNG are to be switched to the United States and Europe at the expense of Asia, there are other risks to be taken into account, most notably the length and cost of the Cape route and the safety and security hazards of transiting the Suez Canal or trans-shipment of large volumes by pipeline across Egypt.

One alternative, recently aired in Washington DC, of a new pipeline for Iraqi, Saudi and Kuwaiti oil to be carried across Jordan and

Israel to new loading terminals on the Mediterranean would inflame public opinion and unite opposition throughout the Middle East. The history of previous pipelines on this route is not good.

SUMMARY

Twenty years ago about one-third of Gulf exports of oil went East and two-thirds went West. Gas (LNG) exports were in their infancy. Today the proportions for Gulf oil exports are reversed with the prospect of Asia steadily increasing its share of Gulf supply. These bilateral arrangements are being enmeshed in long-term trading, financing and economic co-operation arrangements and contracts which deliberately isolate them from the open market. The multinationals and other carriers of Gulf oil and gas will not therefore be able to divert their cargoes to the West whatever the price offered by the United States and Europe.

This suggests that the United States and Europe should be re-examining urgently their assumptions about enhanced imports of oil and gas. This, together with the likely prospect of a rising long-term oil and gas-price, may stimulate new investment in domestic resources such as the US Continental Shelf and Alaska and in other sources of European imports such as those available in Russia and Central Asia. Energy demand management, particularly fiscal incentives for improved efficiency of energy use, may also be coming up for radical review.

Nonetheless there is considerable hope that, as all sides recognise the above realities of the market, there will be room for some Gulf oil and gas to flow West. The Gulf producers will not wish to put all their eggs in the Asian basket and will wish to obtain Atlantic prices from their Asian customers by participating in small measure in that Atlantic market. The Asian consumers, who are already united by their anger over the “Asian premium”, the differential between f.o.b. prices on Gulf cargoes going East and West, will nonetheless be competing vigorously with each other.

The US military and naval protection of the key sea-lanes and notable choke-points (notably the Straits of Hormuz and the Straits of Malacca) will almost certainly be financed willingly and amply, directly or indirectly (in cash or in oil and gas) by the principal Asian importing states and the lead Gulf producers.

Such a benign and peaceful outcome in global economic and political terms is likely to be frustrated if it is widely perceived in the Middle East that the US/UK mandate in Iraq whether of short or long duration, involves any expropriation of Iraqi oil.

All the Gulf states have a fundamental interest in a peaceful stable political environment to enhance development and prosperity, and regard the growing violence, social turbulence, economic development delay and widespread individual suffering in Iraq as a magnet for dangerous outside dissidents. This poses the threat of a spill-over, challenging their own stability and security. Any collapse in confidence in the Gulf political system would also effectively put a block on most investment in new oil and gas production capacity.

The litmus test of good faith will be clear if revenue from sales of Iraqi oil is seen to be being wasted or not fully and efficiently deployed for the direct benefit of the Iraqi people or is seen to be diverted elsewhere, directly or indirectly, outside Iraqi control.

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ANNEX A

Books by Paul Tempest include OF THE DESERT AND THE SEA, A guide to the Gulf, 1972; INTERNATIONAL ENERGY MARKETS, 1982; THE POLITICS OF MIDDLE EAST OIL, 1993 and WORLD PETROLEUM AT THE CROSSROADS, 1999.

Articles by Paul Tempest include The Financing and Payments System of the North Sea (Bank of England Quarterly Bulletins, 1979; The Energy Investment Dilemma (IAEE Presidential Address, San Francisco, 1984; Gas in the 21st Century (The World Gas Trade, ed MA Conant, 1986); The Legacy and Future of OPEC (OPEC Bulletin, 1991).

Recent Reports by Paul Tempest include CHINA AT A TURNING-POINT (for WPC, 1997); OIL MARKET ILLUSIONS (for the US Department of Energy, 2000); THE PROSPECTS FOR ENERGY (for the Athenaeum, London, 2001); and ARAB COMPETITIVENESS IN GLOBAL OIL AND GAS (for the World Economic Forum,

Geneva, 2002. Summaries of these have been published in the IAEE Newsletter and/or Geopolitics of Energy and Energy Policy.

TABLE 1

GLOBAL OIL : NORTH AMERICA'S SHARE in 2002

Mbd	CONSUMPTION	PRODUCTION	Shortfall (-) Surplus (+)
USA	19.7	7.7	- 12.0
CANADA	2.0	2.9	+ 0.9
MEXICO	1.8	3.6	+ 1.8
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N AMERICA	23.5 (31.0%)	14.2 (18.8%)	- 9.3

Source: BP Statistical Review of World Energy, June 2003

TABLE 2

GLOBAL OIL : ASIA PACIFIC'S SHARE IN 2002

Mbd	CONSUMPTION	PRODUCTION	Shortfall (-) Surplus (+)
CHINA	5.6	3.4	- 2.2
JAPAN	5.3	-	- 5.3
S.KOREA	2.3	-	- 2.3
INDIA	2.1	0.8	-1.3
OTHER	6.1	3.1	- 3.0

ASIA PACIFIC	21.4 (28.3%)	7.3 (9.6%)	-14.1
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Source: BP Statistical Review of World Energy, June 2003

TABLE 3

GLOBAL OIL : THE MIDDLE EAST SHARE IN 2002

Mbd

	<i>CONSUMPTION</i>	<i>PRODUCTION</i>	<i>SHORTFALL (-) SURPLUS (+)</i>
SAUDI ARABIA	1.4	8.7	+7.3
IRAN	1.1	3.4	+2.3
IRAQ*	0.5	2.0	+1.5
KUWAIT	0.2	1.9	+1.7
UAE/QATAR	0.3	3.0	+2.7
OTHER	0.8	2.0	+1.2
MIDDLE EAST	4.3 (5.6%)	21.0 (27.7%)	+16.7

Source: BP Statistical Review of World Energy, June 2003

TABLE 4

GLOBAL INTERNATIONAL OIL TRADE SHARES

Mbd

<i>MAJOR NET IMPORTERS</i>		<i>MAJOR NET EXPORTERS</i>	
<i>USA</i>	<i>10.5 (26%)</i>	<i>MIDDLE EAST</i>	<i>18.1 (41%)</i>

<i>EUROPE</i>	9.7	(27%)	<i>FSU</i>	5.4	(12%)
<i>JAPAN</i>	5.1	(12%)	<i>WEST AFRICA</i>	3.1	(7%)
<i>CHINA</i>	1.4	(3.2%)	<i>MEX/ VEN</i>	2.0	(5%)
<i>OTHER</i>	13.5	(31.0%)	<i>OTHER</i>	15.0	(35%)

Source: PTA London

TABLE 5

PTA ESTIMATES OF GLOBAL OIL TRADE IN 2025

Based on IEA, World Bank, APERC and Industry Estimates

Mbd

<i>MAJOR NET IMPORTERS</i>		<i>MAJOR NET EXPORTERS</i>	
<i>USA</i>	18-22	<i>MIDDLE EAST</i>	21-24
<i>EUROPE</i>	19-21	<i>FSU</i>	7-9
<i>JAPAN</i>	7-9	<i>WEST AFRICA</i>	5-7
<i>CHINA</i>	10-12	<i>VEN/ MEX</i>	6-7
<i>ROW</i>	24-28	<i>ROW</i>	17-21
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<i>TOTAL</i>	78-92		56-68

THESE ESTIMATES PRODUCE A GLOBAL SHORTFALL of 10 – 36 mbd and throw into question the validity of the net import estimates

TABLE 6

GLOBAL PROVED RESERVES OF OIL AND GAS at end-2002

	<i>OIL (000mnbls)</i>	<i>%</i>	<i>GAS (TCF)</i>	<i>%</i>
<i>USA</i>	30.4	2.9	183.5	3.3
<i>CANADA</i>	6.9	0.7	60.1	1.1
<i>MEXICO</i>	12.6	1.2	8.8	0.2
N. AMERICA	49.9	4.8	252.4	4.6
<i>IRAN</i>	89.7	8.1	812.3	14.3
<i>QATAR</i>	15.2	1.5	508.5	9.2
<i>SAUDI ARABIA</i>	261.8	25.0	224.7	4.1
<i>IRAQ</i>	112.5	10.7	109.8	2.0
<i>KUWAIT</i>	96.5	9.2	52.7	1.0
<i>UAE</i>	97.8	9.3	212.1	3.9
<i>OTHER</i>	13.1	1.4	49.5	0.9
MIDDLE EAST	685.6	65.4 %	1979.7	36.0 %
<i>RUSSIA FED</i>	60.0	5.7	1680.0	30.5
<i>OTHER FSU</i>	17.8	1.7	272.6	5.0
TOTAL FSU	77.8	7.4	1952.6	35.5 %

<i>OTHER – ROW</i>	236.4	22.4	1316.8	23.9
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<i>TOTAL WORLD</i>	1047.7	100%	5501.5	100%

Source: BP Statistical Review of World Energy June 2003