Challenges in the Changing International Oil Market

Changing Realities for the Middle East in Global Energy Markets

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9/11, Iraq and Old Assumptions

- For first time in a generation, there has been a questioning of critical underlying assumptions about the international oil market
- In the US, a widely perceived view that artificially high oil prices are not a problem, per se, but that the use of funds from oil exports financing terrorism is critical
- The core US-Saudi connections is being challenged in both countries
- Two new participants have entered the market and have large stakes in changing the ‘rules of the game’ - Russia and China

But the weight of the past makes impedes radical change

- Despite recent frictions, the US and Saudi Arabia have tight, overlapping interests
- The two superpowers of international energy have unique sources of power that are difficult to undermine/replace
  - ***In the geopolitics of energy, all roads lead to Washington***
  - ***When it comes to oil, Saudi Arabia alone has spare capacity***
- If world oil demand resumes past rates of growth, only the Middle East will be able to provide supplies
- A brief look at these critical issues

The US is making decisive breaks with the past

- Open-ended military presence in a major oil producing Arab country, not at invitation of government
- Doctrine of preventive war
- New attitude toward supporting ‘democracy’ in Middle East
- US-Russian energy détente
- Withdrawal of troops from Saudi Arabia
- Openness toward neo-conservative thinking on oil

Neo-conservative views on oil

- Diversity of supply is a political means as much as an economic objective
- Need to break Opec's ability to set prices
- Low prices deprive unfriendly states of revenue for developing WMDs, supporting terrorism
- Privatization of oil sectors of Middle East will facilitate flow of funds to average citizens, away from authoritarian regimes, corrupt statist systems
- Oil trusts/stabilization funds are an important policy tool to assure that oil rents are spent in a way that provides citizens stakes in their energy sector, prevents money from being spent in ways that could threaten US security/national interests

But this view confronts key reality checks

- Key US policies sustain the status quo
  - The US is the main “subsidizer” of Opec - unless the USG acts to restrain demand, this will continue
  - The US government won’t use its strategic petroleum reserves to support change in the energy system
- There is no ready alternative to Saudi oil
- Middle East oil is likely to rise in importances in the decades to come

US - Key Driver of 1990s Oil Market, Asia-Pacific comes in second

US and Asia Pacific Share Of World Oil Demand, 1991 and 2000

	1991	2000
United States	24%	26%
Asia-Pacific	22%	28%

US Net Oil Imports as a share of Global Oil Trade, 1991 and 2000

	1991	2000
Total	32.34 mmb/d	42.67 mmb/d
Net US Imports	**6.79 mmb/d**	**10.20 mmb/d**

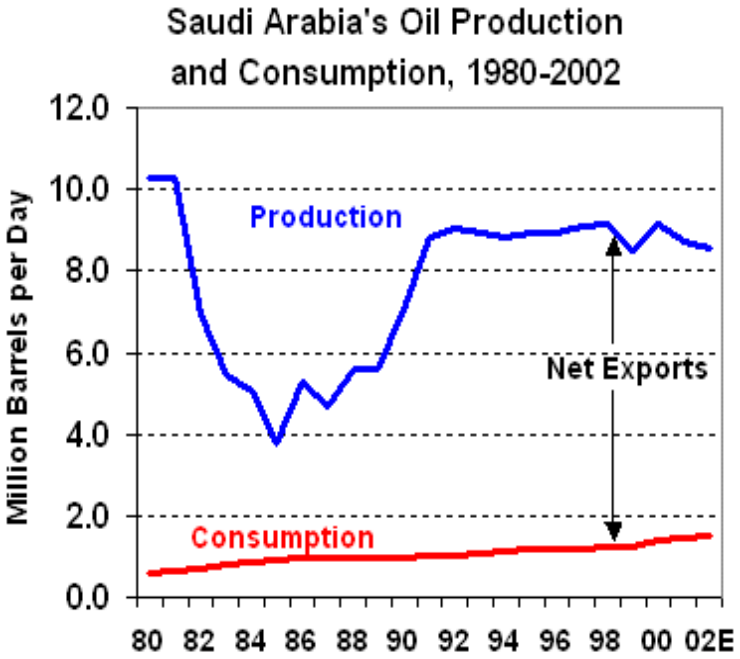
US Share of Increase in Global Oil Trade, 1991-2000	**33.02%**
US Share of Increase in Opec's Output, 1991-2000	**55.58%**

US net oil imports rise by 3.4-mmb/d in 10 years

The same story is being repeated this decade and next

- By **2010**, US oil consumption should exceed 22-mmb/d **(+3- to 4-mmb/d** over decade)
- Production should fall to 5.5-mmb/d
- US imports should grow to 16.5-mmb/d
- **US imports could even rise by 6- to 7-mmb/d**, more than the total consumption of any other country
- **Thus, US drives status quo, enables both Opec and non-Opec to share in a growing pie, impedes pressures for change**

What about Saudi Arabia? Resource/Production Base



Note: Production includes crude oil, natural gas liquids and refinery gain.

- Reserves of 261.8-billion barrels, 25% of world, 86 year R/P ratio
- Average output of 9.1-mmb/d last 11 years (BP stats)
- Share of world supply reached peak of 16.3% in 1980, averaged over 13.5% 1991-1995, fell to 11.8% in 2002
- Share of world oil trade still over 20%
- Production capacity of 10.3-mmb/d, or so (and rising?)

And the rest of the Middle East

- Iran, Iraq, Syria, Sudan, and Libya produce 8-million b/d, over 10% of world supply
- Total Middle East supply is over 1/3 of global oil requirements
- Friendly Kuwait has found it nearly impossible to open its oil sector to more investments
- Major obstacles confront the desire to increase Iraqi production
  - Security
  - Repair of facilities, export facilities
  - History and Geography are difficult impediments
  - Stability and order in the new regime
  - Will a new regime be able to attract capital

Saudi Arabia:

Key Saudi Drivers

- Maintain oil's competitiveness internationally → price ceiling below $30
- Maintain kingdom's role as #1 global supplier → be prepared to punish any challengers
- Meet financial requirements → $25 Opec basket price
- Maintain Washington's security commitment → keep gasoline prices moderate, be #1 supplier to US, supply US military fuel needs
- Foster global economic growth
- Use oil for political purposes → Pakistan, Morocco, Jordan
- Maintain spare capacity to replace any other single oil exporter
- Prevent "free riders" in Opec or Non-Opec

Saudi Shut-in Production Capacity

- Created more by accident than design.
- Enables kingdom to replace next largest exporter (except, now, Russia)
- Provides ‘carrot’ for dealing with ‘friendly countries.’
- Enables KSA to play a disproportionately important role in international affairs.
- Among oil producers, provides the Saudi’s their ‘weapon’, or critical foreign policy instrument, in negotiating production limits, within and outside Opec.
- With others, especially the US, provides a voice in global macro-economic policy, Middle East ‘peace’ and other regional and global issues

Saudi Arabia:

What Else Drives Saudi Policy?

- Personalized diplomacy – oil for Syria, Jordan, Pakistan, Morocco
- Collective Ownership of Resources:
  - ‘Oil reserves were put here by God, for Muslims, to serve Muslim purposes’
  - Oil provides the means to play a global role, protect Muslim interests
- ‘Free markets’ are not ‘free,’ don’t serve Saudi interests
  - Markets are controlled by oil majors, NYMEX speculators and Western governments, don’t provide a ‘fair price.’
- Geopolitics of oil:
  - Diversification of supplies, taxation, conservation in OECD designed to deprive oil exporters of power, influence

Estimated Saudi Shut-in Capacity

Saudi Arabia: Production Versus Capacity at year-end
(in '000 b/d)

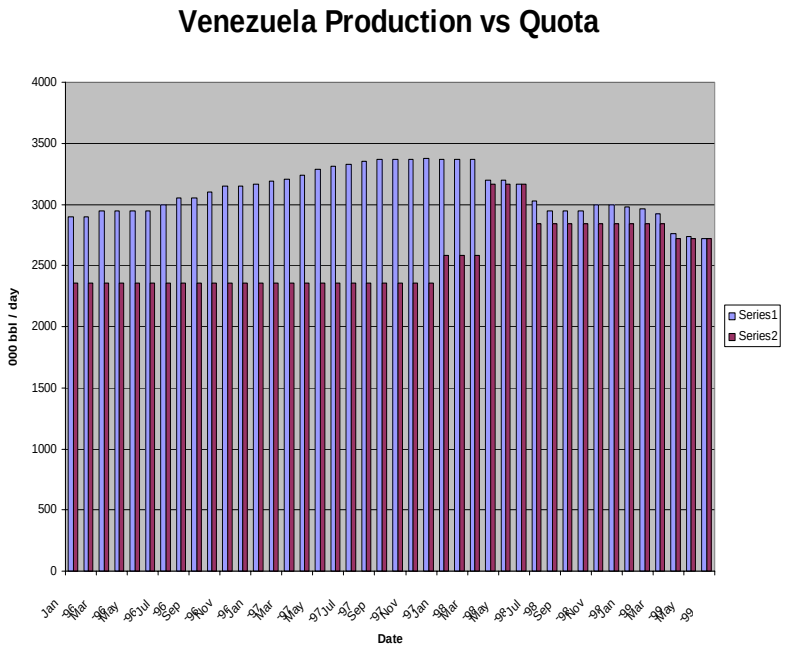
Year	Production	Capacity	Surplus
2002	8580	10270	1690
2001	7310	9800	2490
2000	8300	9800	1500
1999	7870	9975	2105
1998	8130	9975	1845
1997	8715	9525	810
1996	8715	9560	845
1995	8110	9925	1815
1994	8090	9900	1810
1993	8110	9400	1290
1992	8500	9200	700
1991	8820	9150	330
1990	8550	9150	600

Source: PIW

Tactical Use of Shut-In Capacity: Supporting the Opec Price Band

Since late 1999, the Opec basket fell below the floor only after 9/11

Strategic Use of Spare Capacity: Venezuela in 1997-98



- After the Gulf War, Venezuela embarked on an independent strategy
- The decision was geopolitical and was a turning away from Opec
- Goal: raise output from 2.3- to 5.5-mmb/d
- Tactic: Ignore Quotas
- Impact: Stole market share from Saudi Arabia, causing kingdom to lose #1 position in US market

Strategic Use of Spare Capacity
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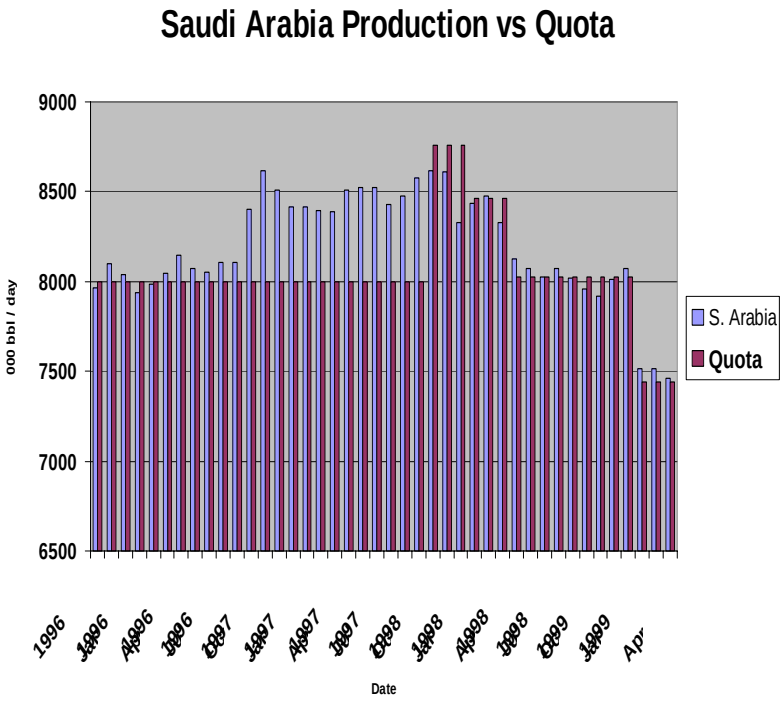


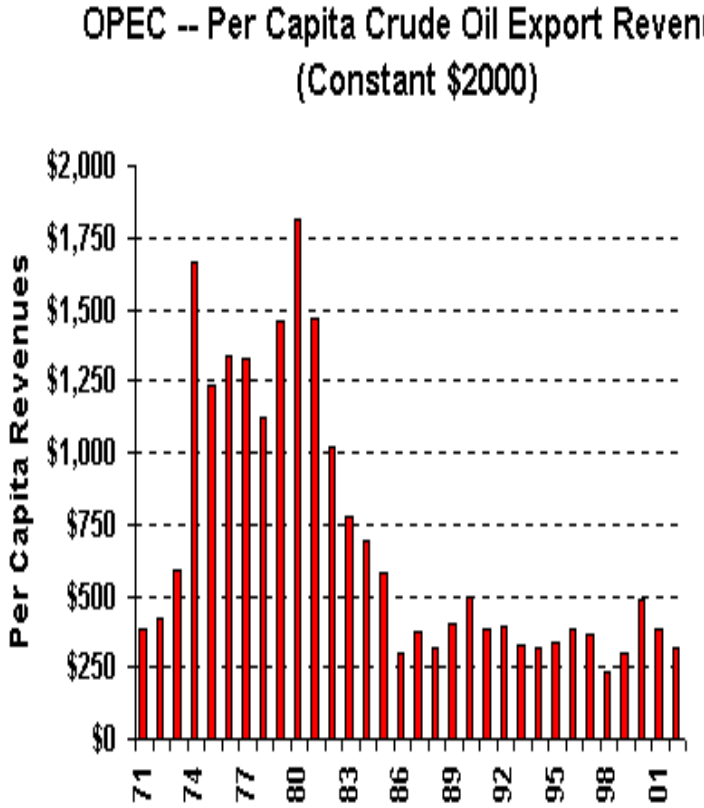
- **Saudi overproduction in 1997 was explicitly designed to punish Venezuela**
- **The price collapse of 1998 was a consequence of the kingdom's use of the deterrent**
- **Saudi Arabia appears ready to use its weapon again, having just undergone two 'fat' years following two 'lean' years**
- **One critical question: can Saudi Arabia sustain or even survive a market share battle with Russia?**

Other Strategic Uses of Spare Capacity

- 1985-86: Changed ‘rules of the game’ by abandoning fixed, or administrative, pricing and adopting market-based (netback) pricing
- 1985-86: Brought down average Middle East crude oil prices from $28 to $13 per barrel, punishing Russia for Afghanistan, depriving Iran, Iraq of revenue
- Along with Kuwait, UAE, increase output by 1.8-mmb/d at end of Iran/Iraq War (1988-89), reducing average Middle East crude oil prices from $17 to $13 per barrel

Major Constraint on Using Spare Capacity: Income needs

"Where you stand depends on where you sit"



- A rapidly ticking time bomb?
- Exploding population creates need for high oil prices
  - 1970 - 6 million
  - 1980 - 9 million
  - 1990 - 14 million
  - 2000 - 22 million
  - 2020 - projected 40-million
- Young, unemployed
  - 52% under 20
  - 6.3 children per family
  - 14-17% of males unemployed
- Widening pool of clerics, poor education
- Upshot: Secure $60-65 billion in annual revenue

Three Common Assumptions about Saudi Arabia and Swing Production

- A swing role is required in *day-to-day* market 'management' in order to counter otherwise unruly, chaotic oil price volatility, which would be intolerable
- Swing production is required *strategically* in order to insure the world against the economic and political consequences of oil price shocks
- *No other producer can replace the Kingdom* in filling these roles

Comment: And yet, before 1973, oil was a much more ordinary commodity, was on the verge of full integration with the OECD investment, trade and payments systems, and showed remarkably little price volatility. Why has the West abandoned market-based goals?

One Common Assumption about the Future: Incremental Demand will be Supplied by 'Core' Opec

US DOE GLOBAL OIL MARKET FORECAST (mmb/d)	2000	2010	2015	2020
DEMAND				
OECD	**44.48**	**50.66**	**54.45**	**57.42**
US	19.78	22.99	25.23	27.13
Eurasia	**5.01**	**5.44**	**6.28**	**7.58**
Developing	**26.61**	**34.54**	**40.71**	**47.05**
China	4.78	6.55	8.28	10.05
India	1.99	3.19	3.95	4.92
Total World	**76.10**	**91.48**	**102.24**	**112.04**
SUPPLY				
Opec	30.81	36.22	44.44	50.88
Core Opec	22.40	28.70	33.00	38.90
Saudi Arabia	10.20	13.60	15.70	19.50
Non-Opec	**45.33**	**54.96**	**57.50**	**60.86**
FSU	8.80	11.6	13.3	14.4
Total World	**76.14**	**91.18**	**101.94**	**111.74**
Year of Projection: 2002				

But Opec Capacity Has Been Frozen for 25 Years

Opec Production Capacity, 1979-2002 (in mmb/d)

Member Country	1979	1983	1990	2000	2002
Saudi Arabia*	10.84	11.30	8.00	9.50	9.90
Iran	7.00	3.00	3.10	3.75	3.70
Iraq	4.00	1.50	3.50	2.90	2.50
Kuwait*	3.34	2.80	2.40	2.40	2.25
UAE	2.50	2.90	2.20	2.40	2.35
Qatar	0.65	0.65	0.40	0.73	0.75
Venezuela	2.40	2.50	2.60	3.00	2.90
Nigeria	2.50	2.40	1.80	2.10	2.25
Indonesia	1.80	1.60	1.25	1.35	1.15
Libya	2.50	2.00	1.50	1.45	1.45
Algeria	1.23	1.10	0.75	0.88	1.15
Total	**38.76**	**31.75**	**27.50**	**30.46**	**30.35**

*Includes 1/2 Neutral Zone Production

Indeed, capacity has actually fallen

Meanwhile, Opec loses market share

Opec Versus Non-Opec Oil Production, 1965-2000 (in '000 b/d)*

	1965	1970	1975	1979	1985	1990	1995	2000	2002
Opec	14385	23509	27168	31238	16695	24692	27466	30901	28240
ROW	20183	24552	28676	34790	40722	40669	40385	43581	45695
Total	34568	48061	55844	66028	57417	65361	67851	74482	73935

Source: BP Statistical Review of World Energy, 2002

*Includes all liquids

Non-Opec output grows despite collapse of the USSR the world's largest producer in 1988

Might the Saudis abandon the swing role, spare capacity ?

- **By Design**
  - Dissatisfaction with status quo
  - As defensive measure against declining market share, rising competition
  - Adopt a volumetric approach to revenue maximization
  - Perhaps re-open oil sector to foreign investment
- **By Other Means**
  - Implosion: Domestic political change, leads to exodus of technical staff, decline in production base and production
  - Imposition: Combination of refusal to increase capacity in a timely manner, change in ‘rules of the game’ by other parties (Russia, US, China, Japan, Europe)

What could lead to a voluntary change in policy ?

- Dissatisfaction with the current system
  - Capacity has not changed much in years
  - Real income has fallen and stagnated
  - Non-Opec supply and market share has continued to grow
  - Global demand has fallen off track and has been roughly half of the ‘targeted’ 1.5- to 2.0-mmb/d per annum
  - Balancing the market depends increasingly on inducing cooperation from non-Opec
  - Success is holding the price bears costs: declining market share, increased difficulty in maintaining cohesion in Opec, subsidizing non-Opec

Changing the rules:

Understanding the costs of a bad bet

- Short-term rational policy: don't increase production capacity
  - Costly
  - Uncertain demand
  - Higher revenue for most countries, including Saudi Arabia, would come from higher prices, which depends on higher demand and lower increase in supply, not from higher demand and higher Opec supply (It takes a lot more output at a lower price to come out even.)
- The short-term policy paid off after 1985-86, as Opec could rapidly increase market share and as spare production capacity fell from 14-mmb/d to more manageable levels
- But….the past half decade has shown the consequences of the supply/demand bet not paying off. How long can the status quo be tolerated?
- Could happen if demand doesn't materialize; if Russia, Caspian, Iraq decide to increase output regardless of price.

How can the rules be changed?

- Gulf countries switch to market share strategy, trading radically higher output for lower prices
  - Would mean a rupture between core Opec and rest of Opec, where no one has the same options on this trade-off
  - Would mean acceptance of short-term revenue losses for longer-term gains
- Saudi Arabia, Kuwait, re-open sector to foreign investment
  - Can ‘work’ only if the “pie” of revenue expands
  - Could unfold in tandem with switch to market share strategy
- Selling the strategy
  - Probably involves a bet that after a period (5 years?), non-Opec output would fall radically, prices would rise

Outside parties changing the rules of the game

- Who else doesn't like today's regime?
  - Current regime dominated by Saudi Arabia, US, and to some extent EU
  - New players emerging that don't have enough say in how the system works: Russia, China in particular
  - New dissatisfaction with system in US, EU
- What can they do to change the rules ?

Others forces of Change - Russia

- Within this decade, Russia will change from being a lumpy, regional European supplier of oil and gas to being (1) a global supplier; and (2) the world's largest exporter of hydrocarbons
- Regardless of what the US does or wants, Moscow and Russian firms will have their own ideas of what is in their interest; they will no longer be 'price takers';
- Moscow will also no longer be a 'regime-taker' and will want to mold the rules of the game according to its own interests; those interests will

Other Forces of Change - China

- China is already emerging as a major player with a systemic perspective on international energy
- The Chinese penchant for bilateral, tied supply deals can reinforce the anti-market elements of today's regime
- Depending on the magnitude, reliability and duration of Chinese demand growth, Beijing could be the hub of a set of special deals with producers, including Russia and the major Middle East suppliers
- Tokyo perceives these forces of change acutely; will this result in any counter-actions? Will others join in ?

Pressures for change

- Undoubtedly there will be significant pressures for changing today's regime, even if the new drivers come mainly from Russia and China
- It is exceedingly unlikely that the current regime involving Opec price setting, cooperation with key leading non-Opec producers, Saudi stability, and acceptance of the status quo by the US and EU will last another 10-15 years
- Will the transition be planned or will it be determined by the unfolding of events?

HESS ENERGY TRADING COMPANY, LLC

A PROFILE

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HETCO's professional trading team undertakes transactions in international and US-domestic crude oils, natural gas, and petroleum products. It is also active in energy swaps and derivatives, and in weather risk management. It is one of the largest participants on both the London International Petroleum Exchange and the New York Mercantile Exchange.

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