

China, Asia, and Global Oil Markets and Geopolitics



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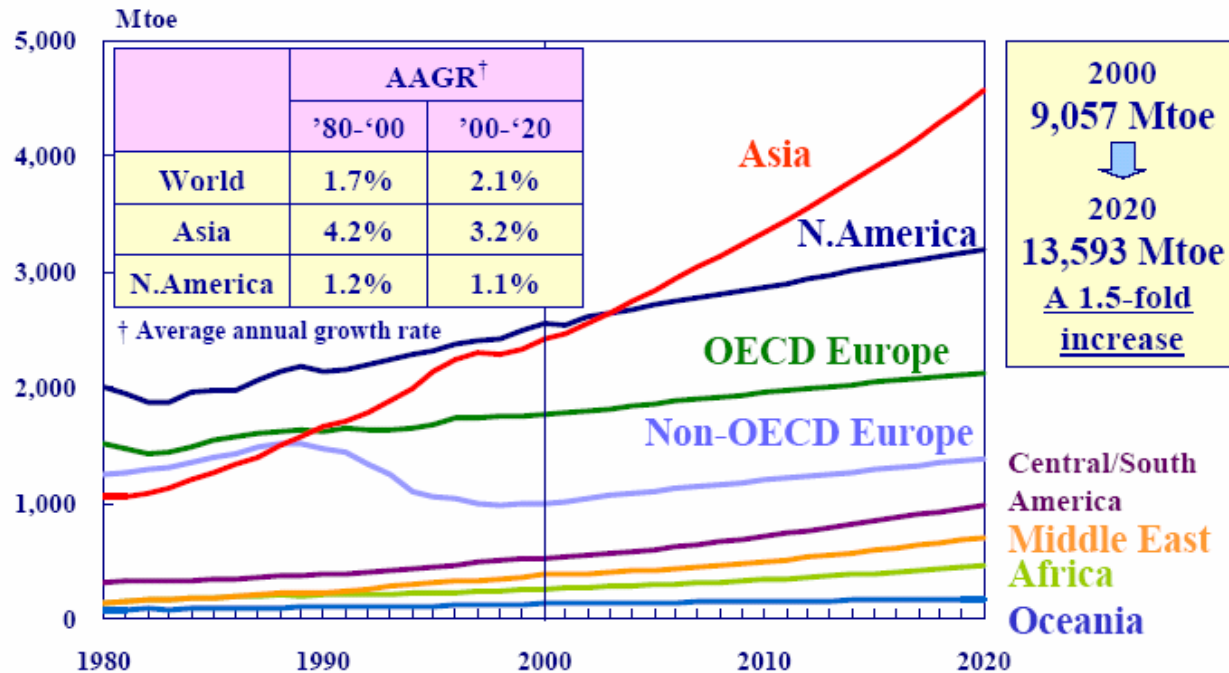
IAEE
Houston, Texas

September 8, 2005

Long Term Asian Oil and Gas Trends

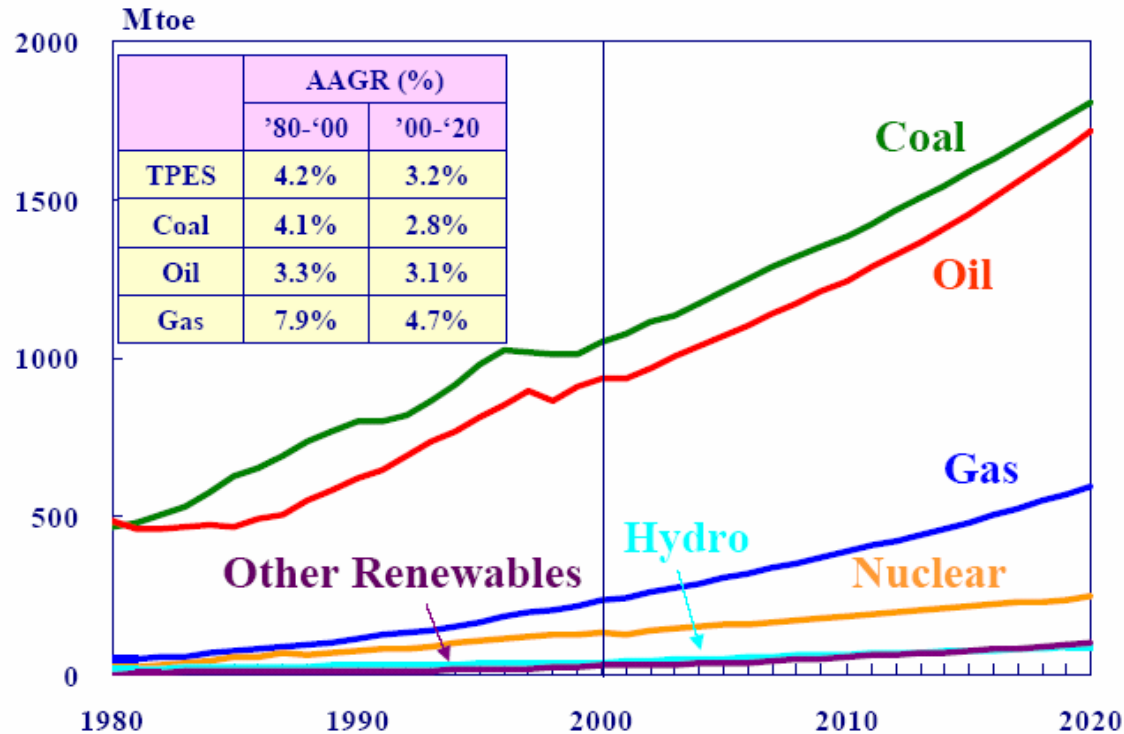
- Oil demand, imports will drive global market
 - Two-thirds of recent growth, 50% of future growth
 - Economic growth, rising per capita incomes, motorization China
 - Weak demand management policies, poor production prospects
- China to account for 20% global energy demand growth, largest incremental oil market (20-25% of global growth)
- India oil and gas demand growth second to China in Asia
- Asia's energy security drive further politicizing global oil market
- Aggravating US-China tensions
- Will force reshaping of global oil management institutions
- Asia NOCs, along with other NOCs becoming serious competitors, potential partners, impacting global oil and gas industry

World Primary Energy Demand by Region



- The increase in world energy demand will center on Asia, the order of which energy demand in 2020 will undergo a roughly 2-fold increase.

Primary Energy Demand by Fuel in Asia



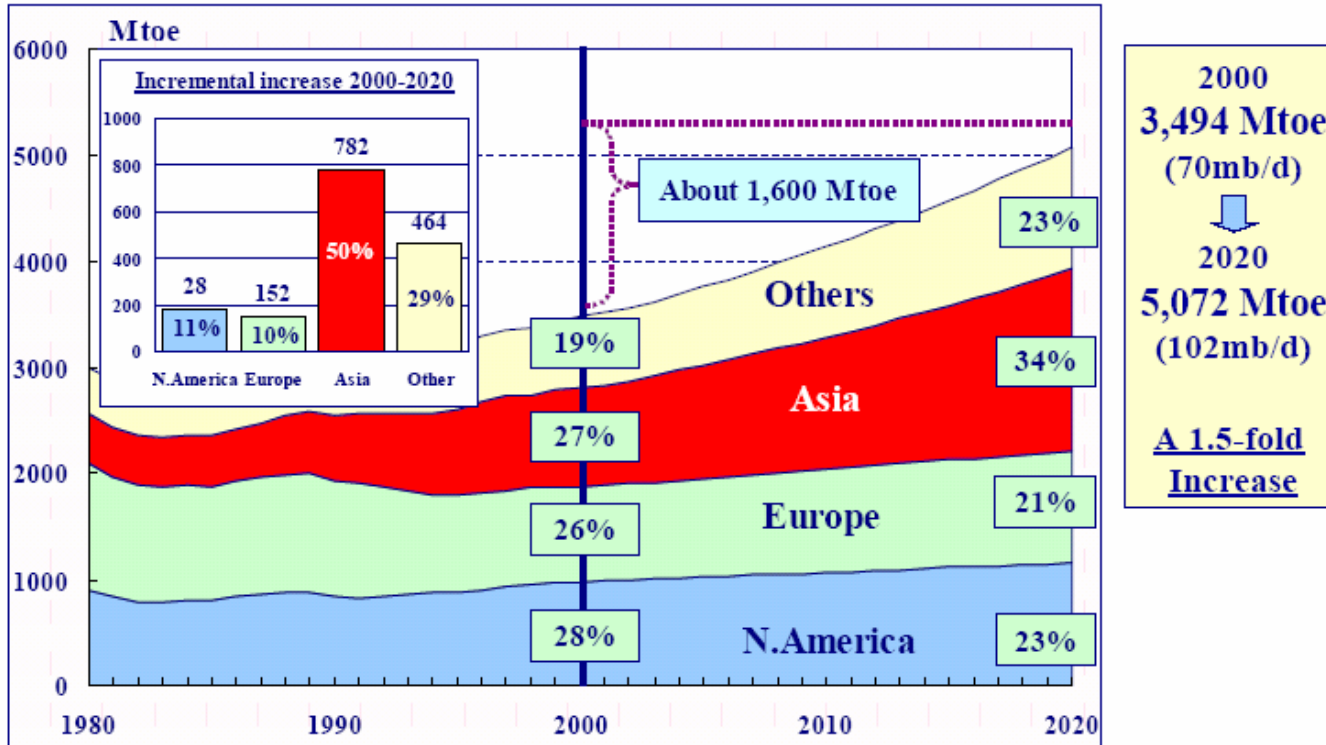
- Both coal and oil will continue to maintain its centrality over Asian energy demand by 2020.
- The share of natural gas is expected to grow substantially, driven mainly by power generation.

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Asia = 67% Global Oil Demand Growth (MBD)

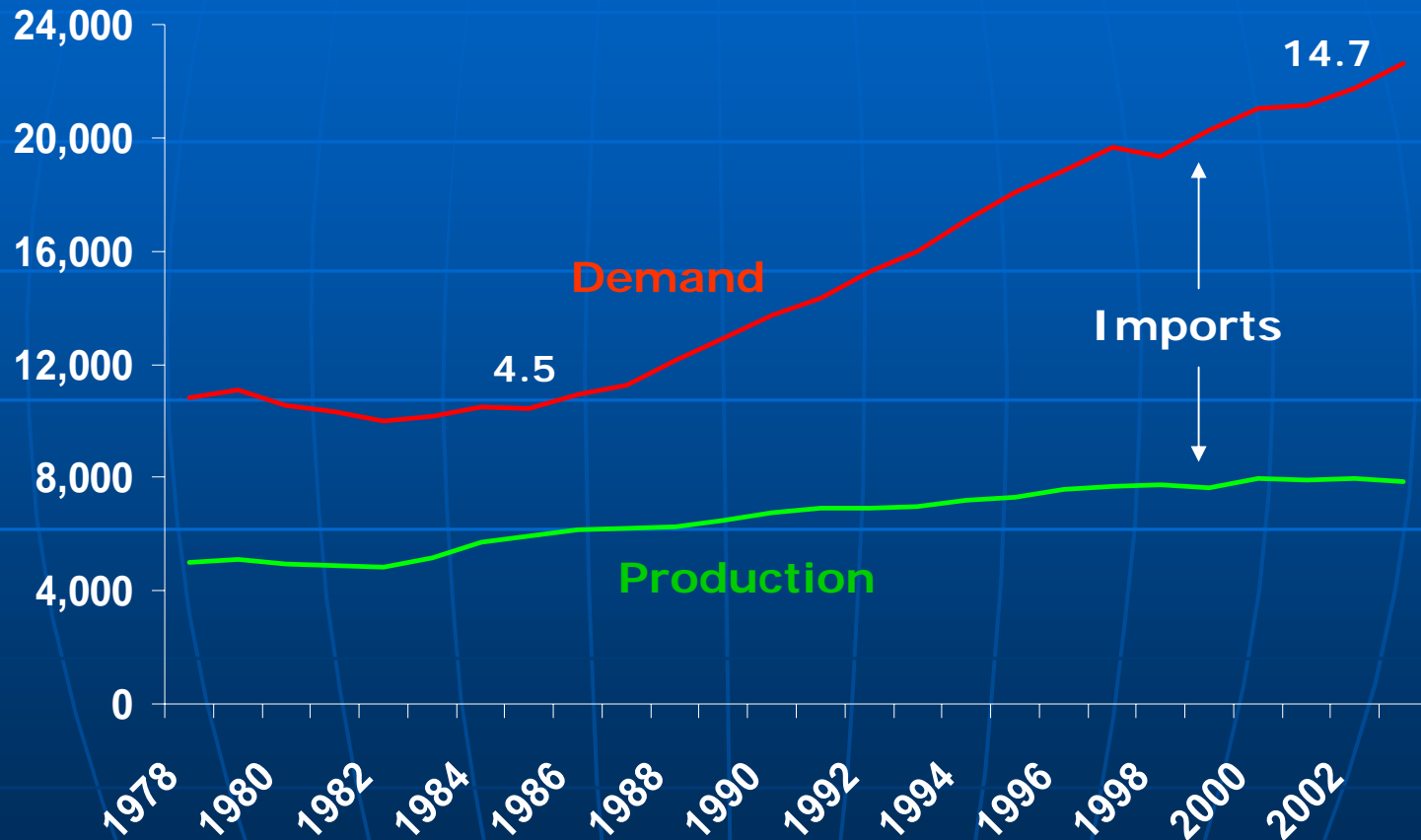
	<u>World</u>	<u>Asia</u>	<u>China</u>
1990	1,229	841	-6
1991	-46	597	158
1992	733	963	252
1993	-199	685	251
1994	1,459	1,109	232
1995	1,127	993	245
1996	1,523	766	282
1997	1,917	843	263
1998	446	-364	112
1999	1,616	926	370
2000	904	808	568
2001	501	105	46
2002	793	579	349
2003	1,248	599	412
2004	<u>2,464</u>	<u>1,109</u>	<u>893</u>
	15,714	10,557	4,424

World Oil Demand by Region



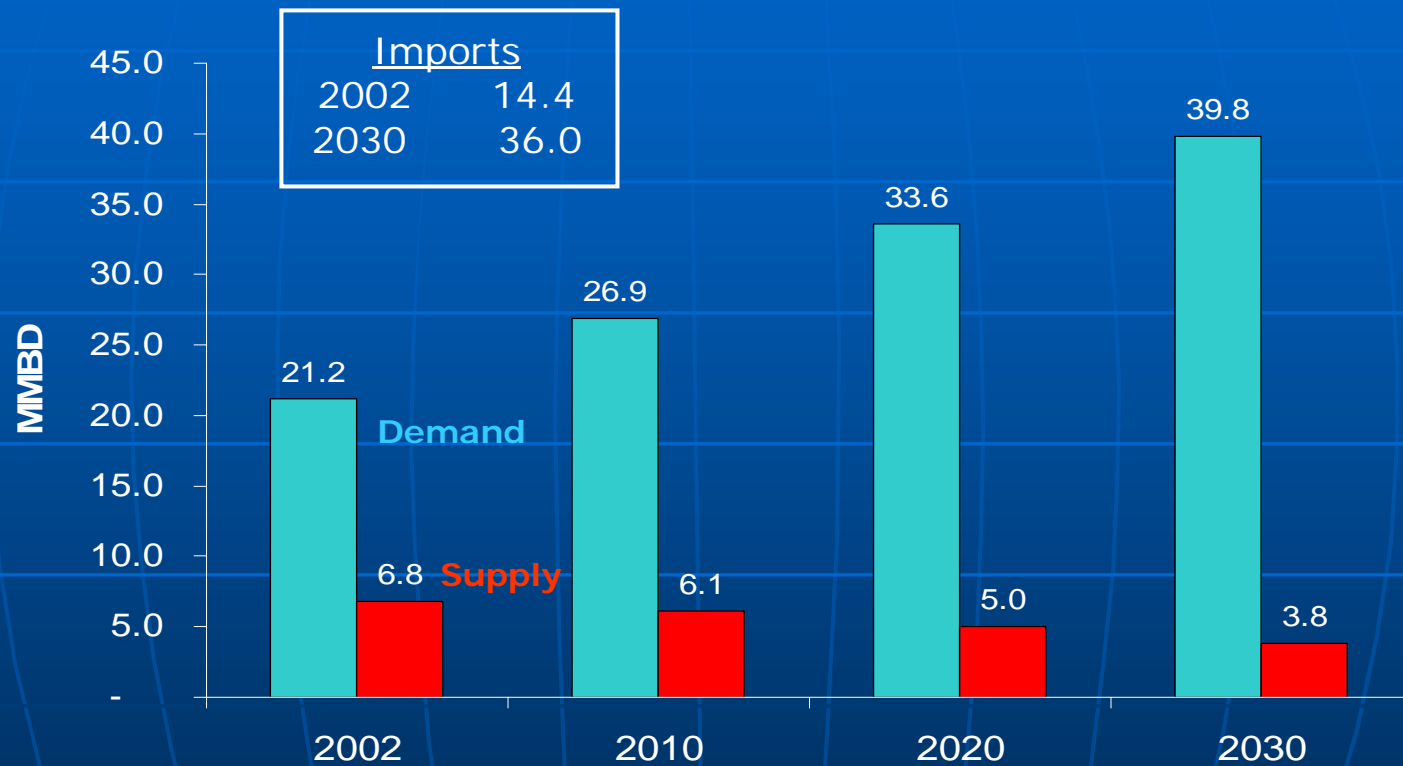
- Asia will account for approximately 50% of incremental increase between 2000 and 2020.

Asian Oil Supply and Demand (MBD)



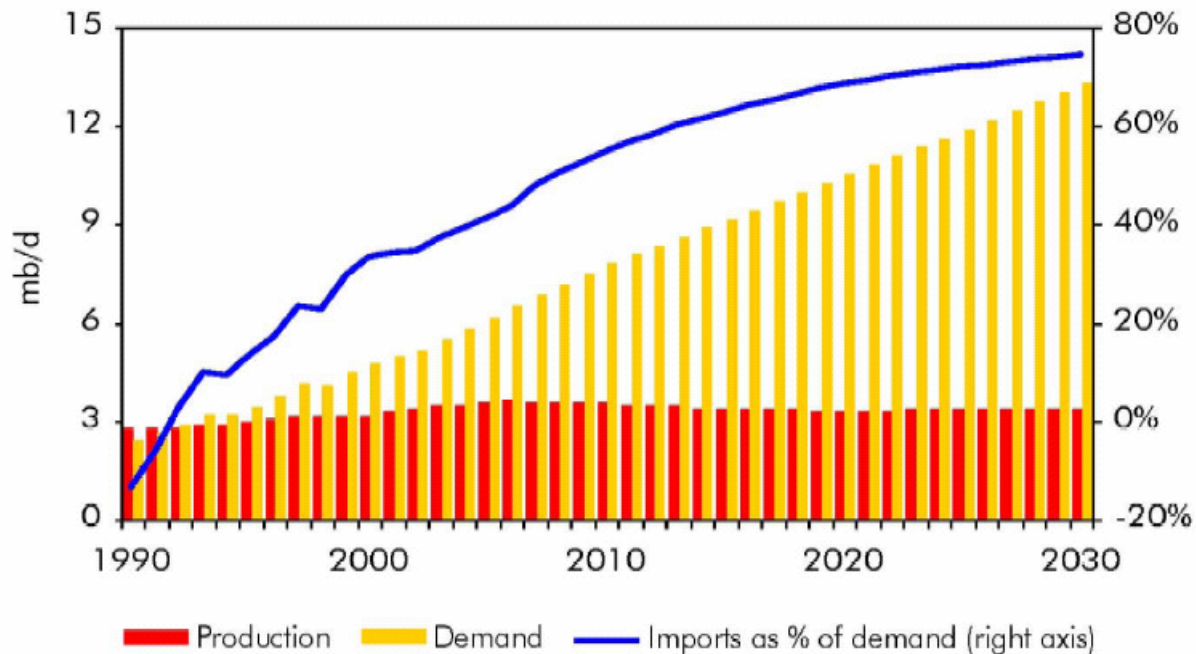
Source: BP

Asia's Future Oil Import Needs



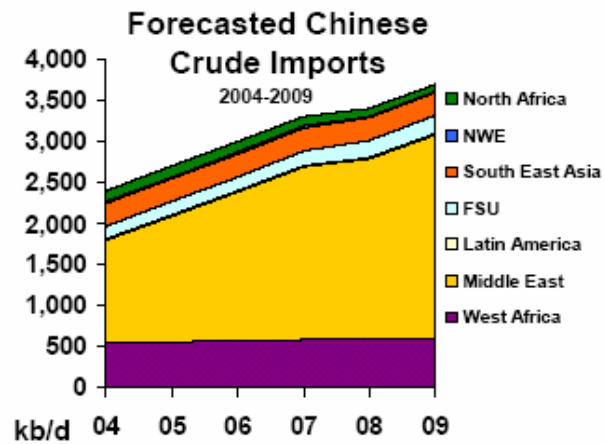
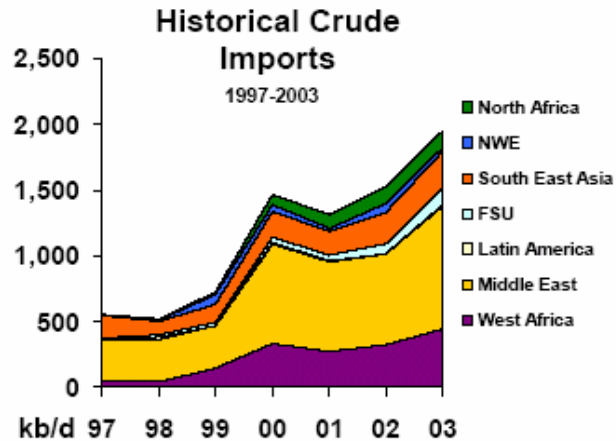
➤ Imports to grow by more than current PG exports

China's Oil Imports Rising



China's oil imports will soar from 2 mb/d today to almost 10 mb/d in 2030, about 75% of demand

Crude Flows To China



Historical & Forecasted



Beijing's Oil Angst

- High prices, tight market aggravating “scarcity” fears
- Growing instability in exporting regions – ME and non-ME
- Terrorism concerns rising – producers and transit
- Heavy dependence on Malacca Straits oil transit
- Fears of US strategic, oil domination, “encirclement”
- Dominance by western IOCs from US, Europe
- Mistrust, rivalries within Asia
- Suspicion of “China’s rise” peaceful or otherwise
- Fear of Chinese oil demand growth, price impact
- Increasingly capricious, politicized Russian oil and gas policies

China's Energy Nationalism

- National security – top leadership concern
- Zero sum geopolitical approach
 - Create strong energy “National Champions”
 - Instructed to “Go Out” and secure supplies for China
 - Diversified equity stakes in global E&P
 - Long-term crude and gas supply contracts
 - Pipelines to diversify transit risk
 - Beijing “Oil Diplomacy” to secure alliances
 - Creation of SPR – currently four locations being built
- Converging on Persian Gulf, Central Asia, Russia, Africa, LatAm
- India emulating China's path, provoking Japan

Asia and Mid-East Exports (MMBD)

	2001	2020	Change
Total ME	<u>16.2</u>	<u>25.2</u>	<u>9.0</u>
Asia	9.4	16.8	7.4
North America	2.8	3.2	0.4
Western Europe	3.1	3.9	0.8
Other	<u>0.9</u>	<u>1.3</u>	0.4
Asia Share	58%	67%	

- 60% of current ME oil exports go to Asia
- 80% of future export growth will go to Asia

Oil Aggravating US-China-Tensions

- CNOOC-Unocal bid firestorm
- Strategic competitors or partners?
- China distrusts U.S. power over oil supplies
- Rising capability to impact key U.S. energy security policies: Iran, Sudan sanctions UN
- China-Middle East Nexus to grow
 - Will challenge US influence in PG
- Reaching out in Central Asia – SCO
 - Interests appear more aligned
 - But China wants US out of Central Asia
- Growing Venezuela, Canada involvement
- US-China energy dialogue vital to future market stability

Global Oil Institutions - IEA

- IEA reflects 1970s oil demand structure
- Asia and LDCs now driving market
- China, Asian oil insecurity resulting in “hoarding”, scramble for supplies, a la 1973-74
- China, Asia, LDCs feel left out of global oil institutions dominated by US
- Global oil institutions need to be restructured to reflect new market

Asia's NOCs

- Driven by national supply security politics
- Feel excluded, playing “catch-up”
- Converging on key prospective regions dominated by IOCs
- Key competitive advantages
 - Willingness to overpay
 - Oil diplomacy by home governments – aid, trade
 - Affinity state NOC-NOC deals
- Despite weaknesses, are altering competitive landscape, further politicizing markets, access to deals, resources

Some Conclusions

- Asia, China to drive global oil demand, markets, prices
- Nationalistic, zero-sum scramble for supplies further politicizing global oil markets
- Asia NOCs inflating prices in global E&P market, altering competitive landscape
- China, Asia to become major force in global energy geopolitics
 - IEA and global institutions need reform
 - Major force in Persian Gulf
 - Growing power in Central Asia
 - Drawing Russia into Asia, closer ties with China
 - How will OPEC react?
 - US power in oil politics?

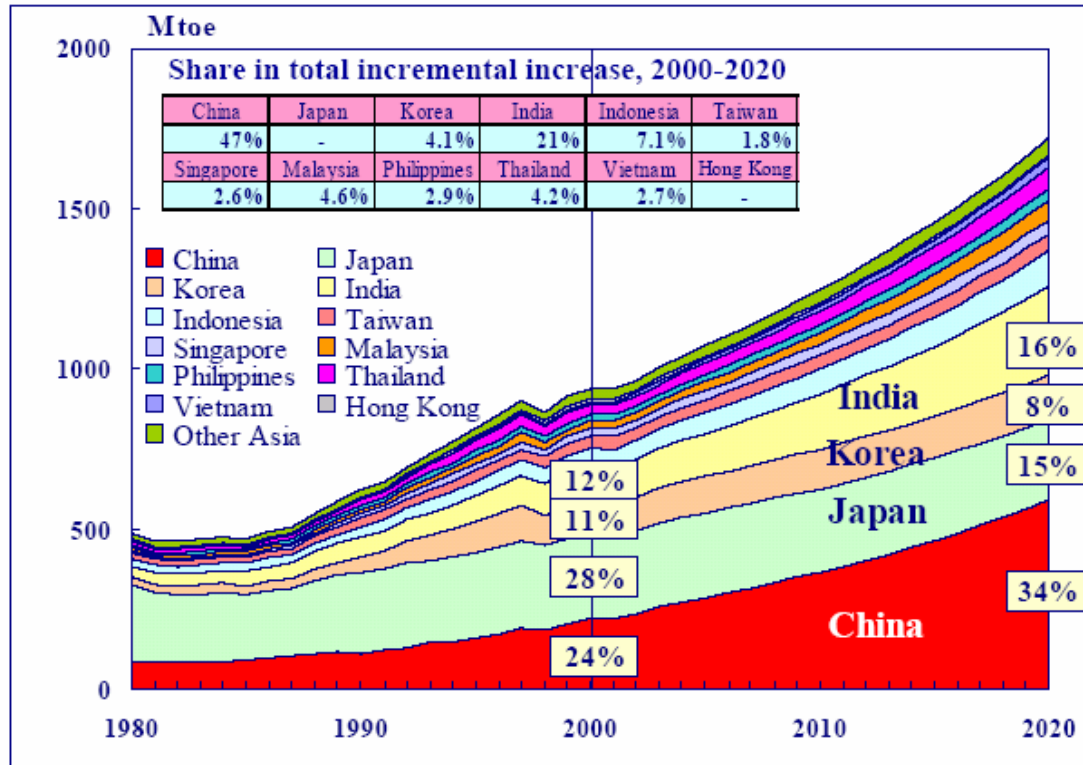
Background

China Oil Demand and Imports (MMBD)

	<u>2000</u>	<u>2004</u>	<u>2010</u>	<u>2020</u>	Implied Imports <u>2020*</u>	Import Share
Actual (BP)	5.0	6.7				
IEA (9/04)			7.9	11.6	7.1	67%
DOE (7/05)			9.2	12.3	8.8	72%
E/W Center (3/05)			8.6	12.3	8.8	72%
IEE Japan (3/04)			7.3	12.0	8.5	71%
Merrill Lynch (11/04)			10.0			

* Assumes 3.5 MMBD Domestic Production

Oil Demand by Region in Asia



2000
938 Mtoe
(189mb/d)

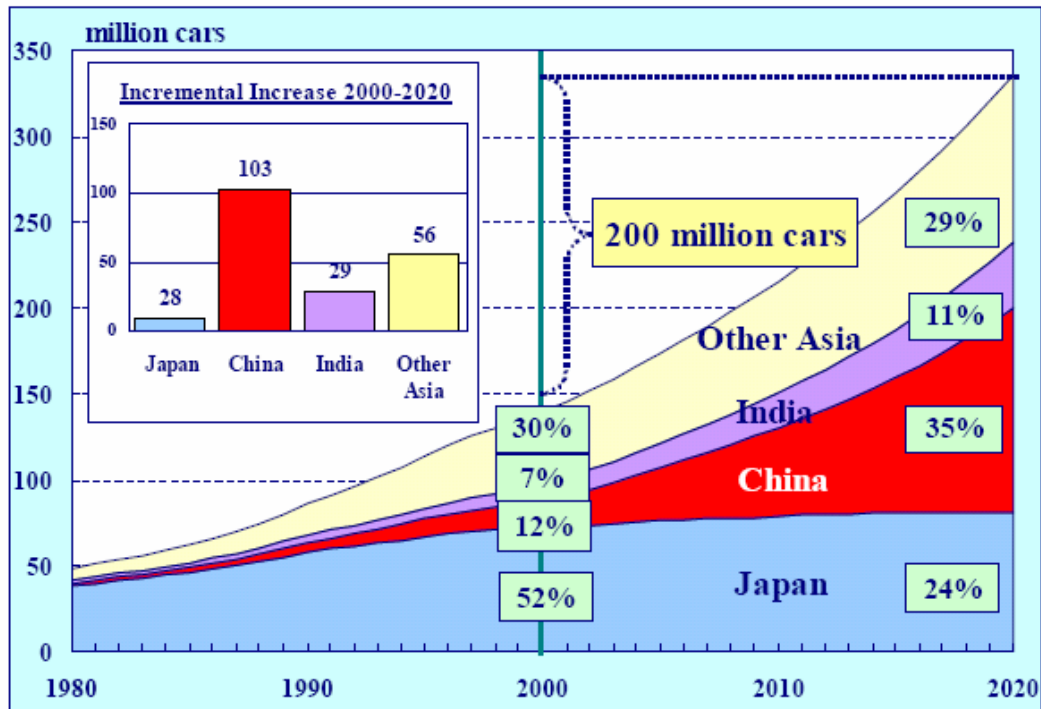
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2020
1,720 Mtoe
(345mb/d)

A 1.8-fold increase

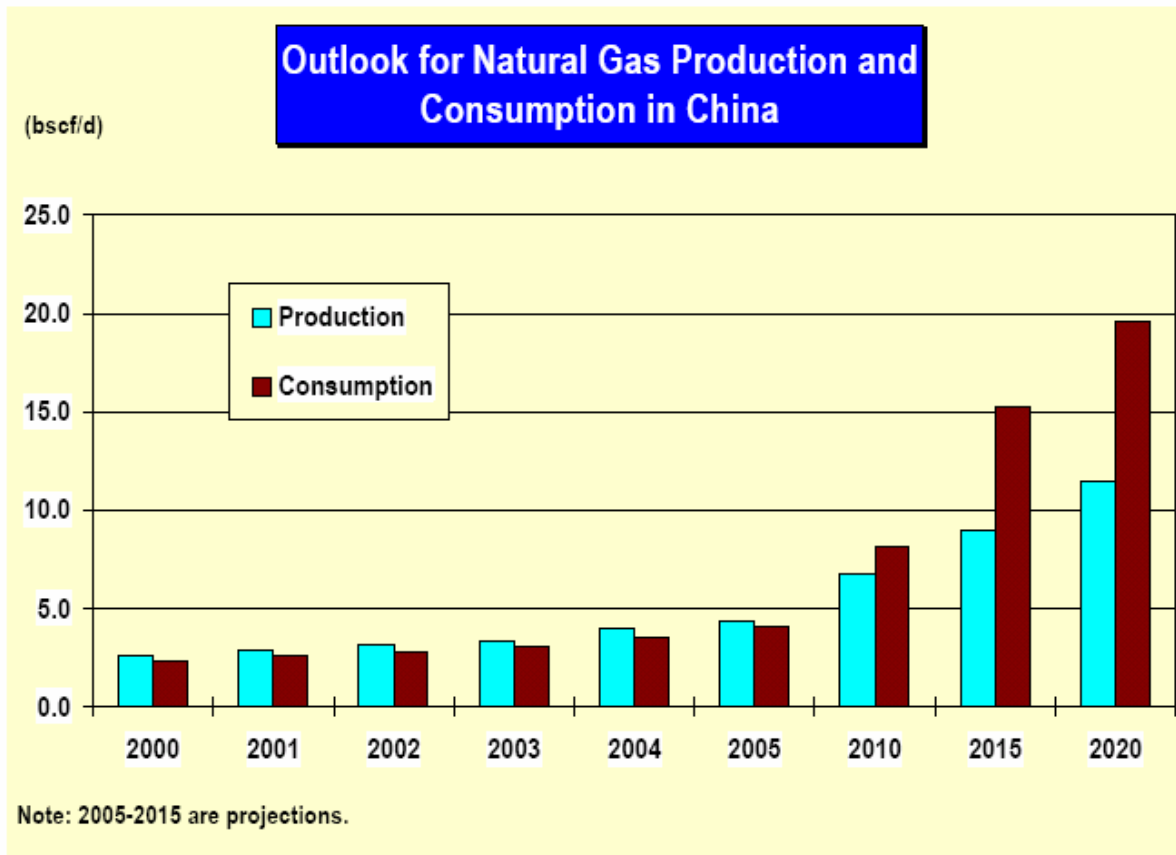
- Oil demand in China will grow from 220 Mtoe in 2000 to 590 Mtoe in 2020, due chiefly to its soaring automobile holdings. 32

Vehicle Ownership in Asia



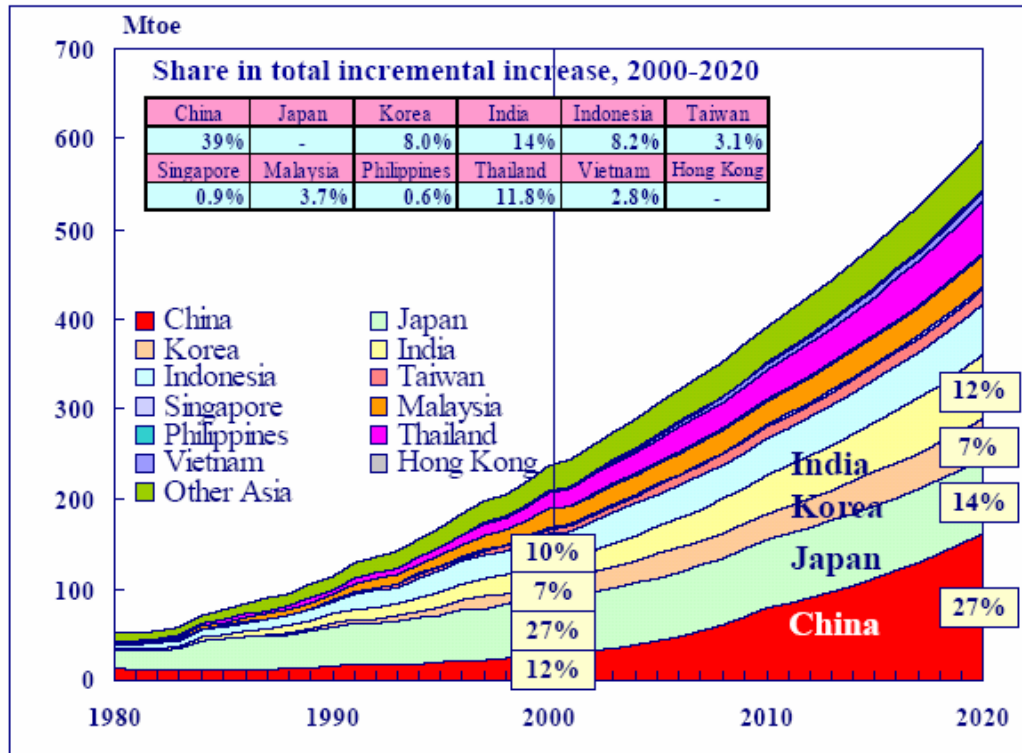
- China will register a substantial surging trend of automobile holdings, although Japan represents a shallow rising trend.

Emerging Natural Gas Shortage



Source: East-West Center

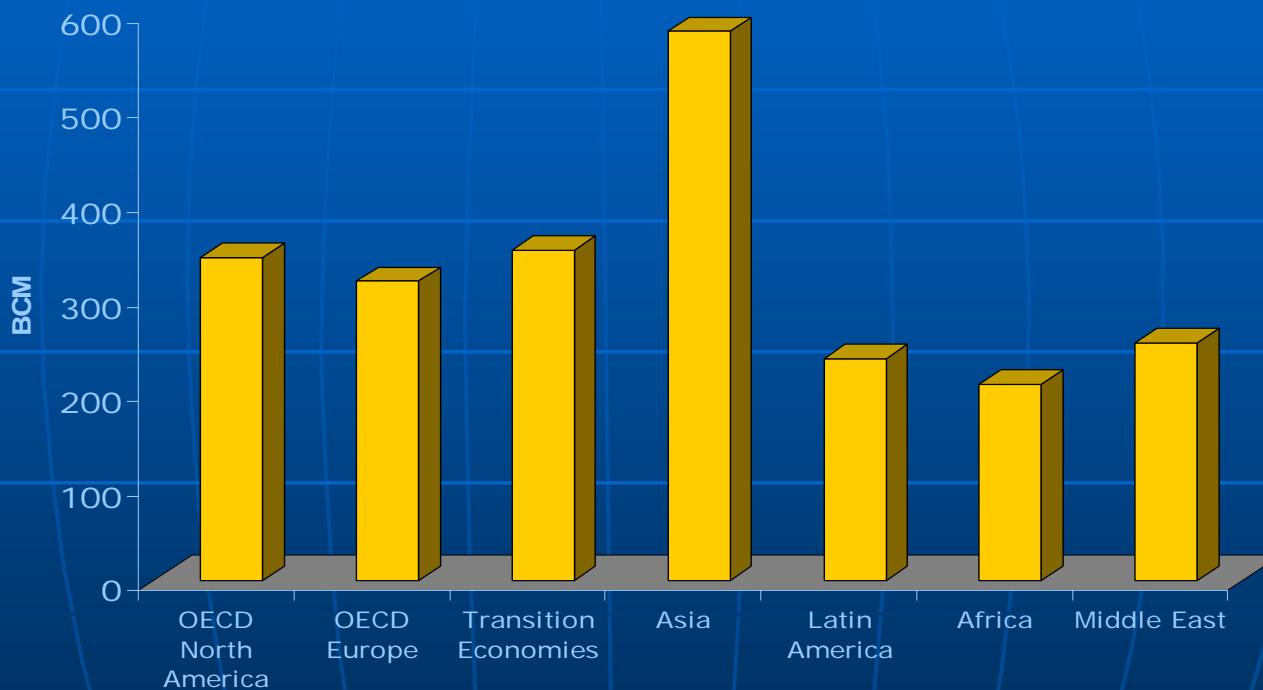
Gas Demand by Region in Asia



- Gas demand in China will increase substantially in a reflection of escalating requirements for power generation, municipal gas use and its environmental advantages.

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Cumulative Gas Demand Growth 2001-2030



➤ Asia's gas demand to nearly triple by 2030

Asia's Natural Gas Imports 2002-2030

	<u>2002</u>	<u>2030</u>
SE Asia to NE Asia	69	104
Persian Gulf to NE Asia	29	57
Alaska to NE Asia	1	0
SE Asia to China	0	10
Persian Gulf to China	0	13
Persian Gulf to India	0	44
Russia to NE Asia	0	22
Russia to China	<u>0</u>	<u>19</u>
Total	<u>99</u>	<u>269</u>
<u>of which</u>		
Persian Gulf	29	114
Russia	0	41
Southeast Asia	69	114

- Total Asian gas imports nearly triple
- Imports from outside region rise five-fold
- Outside import share rises from 29% to 58%