



# Oil & Gas

## 石油与天然气

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# **China Oil & Gas Sector – Investment Matrix**

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**Massachusetts  
Institute of  
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# China Oil & Gas Sector Themes

## Oil

- Lower demand growth this year (+6% vs +10% in 2006)
- Transportation fuel, chemical feedstock, kerosene continue to drive demand growth; LPG slower, industrial segment flat
- Refinery upgrading, expansion and consolidation to improve economy of scale, feedstock flexibility and reduce pollution
- Wholesale oil liberalization effective mainly for players with access to products or import license
- New cost-plus system for oil products prices, but Government control to remain given inflationary and social concerns

## Natural Gas

- Partial substitute for LPG, fuel oil, naphta
- 20% market growth in 2006, to double every 5 years
- Sources incl. offshore SE China Sea, Inner Mongolia, Western China, LNG imports
- Significant pipeline and infrastructure investments needed to connect gas sources in West/North to demand centers in East/South
- National-level price guidance incl. for West-East pipeline gas, but fragmented provincial-level T&D regulation

# China Oil & Gas Investment Matrix

	Typical Investment Size	Strategic Players	Private Equity/Venture Capital	Int'l Strategic Investors	Int'l Contractors, E&C, Equipment Suppliers
<b>Upstream Oil &amp; Gas</b>					
<b>Exploration, Development &amp; Production (E, D &amp; P)</b>	small (US\$50 mn) to large (US\$ multi billion)	Chinese Oil Majors, Int'l Majors/Independents; domestic and foreign privates	Invest in small & medium size fields (P & D)	Medium & large fields (E, D & P); new technologies; best practice	New technologies; partner w. Chinese contractors / engineers; co-invest in projects
<b>Oilfield services (OFS) &amp; rig operators</b>	small to large	Subs of Chinese Majors; international and domestic OFS & rig operators	Invest in Chinese OFS & rig operators	Market to Chinese customers; invest in and partner w. Chinese OFS & rig operators	New technologies; partner w. Chinese contractors / engineers; co-invest in projects
<b>Rigbuilders, EPC contractors, equipment suppliers</b>	small to medium (US\$500 mn)	International and domestic contractors, engineering & consulting (E&C) companies, equipment suppliers	Invest in Chinese contractors, E&C, equipment suppliers	Selective investments in new technologies, processes & services	New technologies; partner w. Chinese contractors / engineers
<b>Midstream Oil &amp; Gas</b>					
<b>LNG facilities / gas transmission</b>	medium to large	Chinese Majors, international Majors and LNG players	Co-invest w. Chinese Majors and domestic players	Partner w. Chinese Majors and domestic players	New technologies; partner w. Chinese contractors / engineers; co-invest in projects
<b>Oil storage, pipelines and wholesale sales &amp; trading</b>	small to medium	Chinese Oil Majors, international Majors, domestic and international companies	Co-invest w. Chinese Majors and domestic players	Partner w. Chinese Majors and domestic players	New technologies; partner w. Chinese contractors / engineers; co-invest in projects

# China Oil & Gas Investment Matrix (Cont'd)

	Typical Investment Size	Strategic Players	Private Equity/ Venture Capital	Int'l Strategic Investors	Int'l Contractors, E&C, Equipment Suppliers
<b>Downstream Oil &amp; Gas</b>					
<b>Refineries, petrochemical &amp; gas processing plants</b>	small to large	Chinese Oil Majors, international Majors	Co-invest w. Chinese Majors and domestic players	Partner w. Chinese Majors and domestic players	New technologies; partner w. Chinese contractors / engineers; co-invest in projects
<b>Oil products marketing</b>	small to medium	Chinese Oil Majors, international Majors and international / domestic players	Co-invest with Chinese Oil Majors and domestic marketers	Partner w. Chinese Majors and domestic marketers	New technologies; partner w. Chinese contractors / engineers; co-invest in projects
<b>Gas transmission, trading and distribution</b>	small to medium	Chinese Oil Majors, international Majors, domestic and international companies	Co-invest w. Chinese Majors and domestic players	Partner w. Chinese Majors and domestic players	New technologies; partner w. Chinese contractors / engineers; co-invest in projects

