Corporate Flash

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China Oil and Gas: Gas play with CNPC connection

Recommendation: STRONG BUY (initiating coverage) — China Utilities

Price	HK$1.37
Target price	HK$2.27 (+65.7%)
12 mth range	HK$0.06-1.53
Market cap.	US$576.1m
Daily t/o, 3 mth	US$8.9m
Free float %	69.0%
Ticker	0603.HK/603 HK

Year to Dec	Net profit HK$m	EPS HK$	EPS Δ %	P/E x	P/B x	EV/EBITDA x	Yield %	ROE %	ROCE %	N. Gear. %
05A	(139.8)	(0.102)	na	na	13.9	na	-	na	na	24.7
06A	57.3	0.060	na	22.8	11.1	45.5	-	23.8	17.6	Cash
07F	62.9	0.016	(73.5)	86.2	5.7	23.5	-	9.1	7.8	Cash
08F	160.0	0.036	124.8	38.4	5.7	11.0	-	14.8	12.3	Cash
09F	242.5	0.054	51.6	25.3	5.4	7.7	-	21.8	14.0	29.9

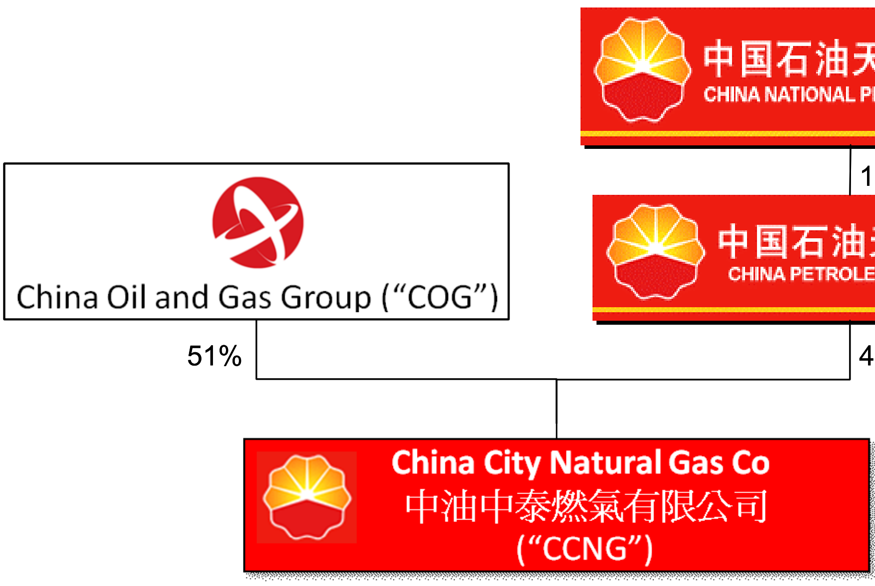
Relative to Hang Seng Index (1 mth, 3 mth, 12 mth): +36.8%, +86.9%, +1,641.6%
Actual price changes (1 mth, 3 mth, 12 mth): +38.4%, +87.7%, +2,183.3%
Note: FY05: August 2004 to July 2005; FY06: August 2005 to December 2006

Key points:

- Downstream gas play with strong CNPC connection.
- Highly integrated business comprising city natural gas projects, CNG stations and LNG plants.
- Simple revenue model with connection fee income accounting for a small proportion of revenue.
- Building strong presence in Shandong Province.
- Expanding its CNG station operation.
- Developing LNG plants to expand gas sources.
- Three-year earnings CAGR estimated at 56.6%.
- Undemanding valuation in terms of FY12/08F PEG.

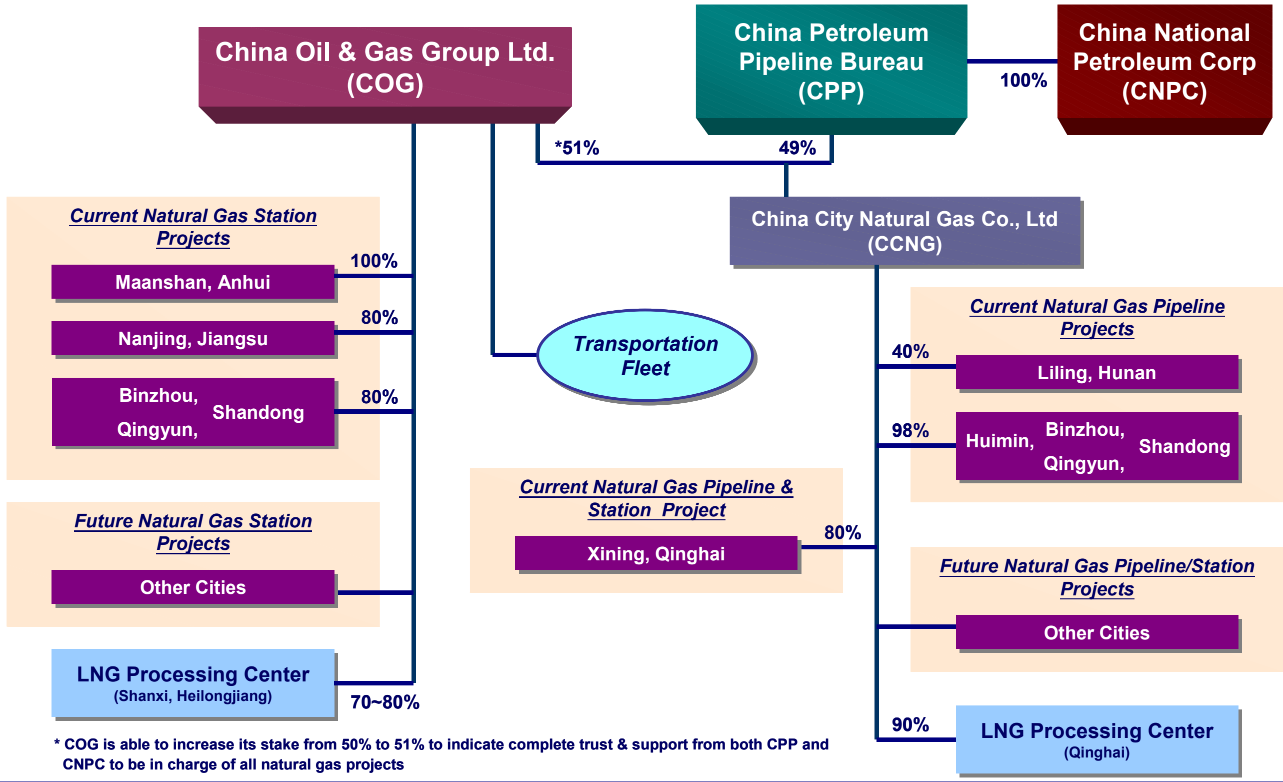
Company background. China Oil and Gas Group is engaged in natural gas distribution and other gas and energy-related services in China. Through its 51.0%-owned joint venture with China Petroleum Pipeline Bureau (CPP, 中國石油天然氣管道局), China City Natural Gas Co (CCNG, 中油中泰), it distributes gas in various cities in China. It also operates its own CNG station networks.

Chart 1: Overall corporate chart



Source: Company

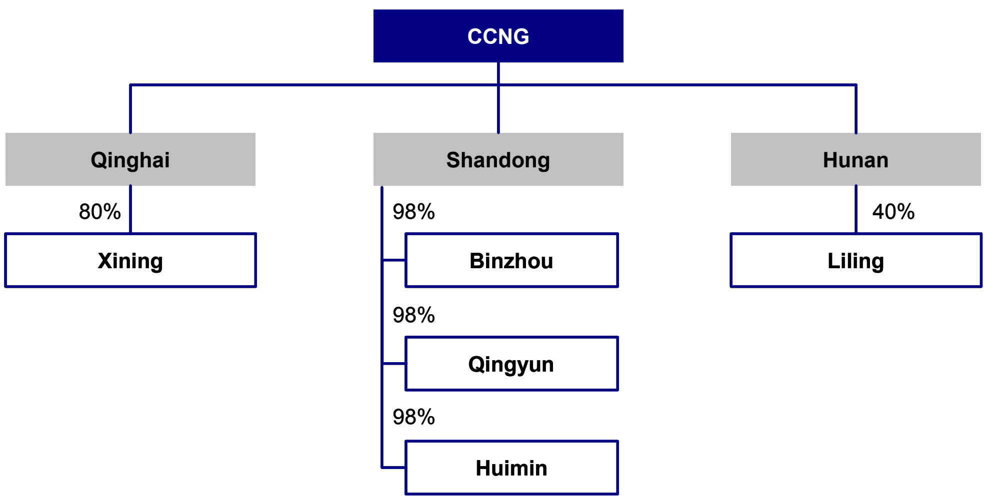
Chart 2: Corporate structure



Source: Company

Partnership with leader. Incorporated in 1973, CPP is a wholly-owned subsidiary of China National Petroleum Corporation (CNPC, 中國石油天然氣總公司), engaged in the design, construction and provision of facilities for long distance oil and gas transmission, oil and gas storage, power transmission and telecommunication. It also provides consulting services on pipeline network design and construction. CCP built almost all of China's major oil and gas transmission pipeline networks, including the renowned West to East project, Zhongxian-Wuhan, Ji-Ning Branch of West-East Gas Pipeline, Parallel Shaan-Jing Pipeline and Alashankou-Dushanzi Crude Oil Pipeline. As of end-2003, it completed about 30,000.0km of pipelines, accounting for 85.0% of China's total. CPP is expanding to overseas market with projects in Iraq, Kuwait, Tunisia, Sudan, Libyan and Malaysia. It has completed 5,000.0km of pipelines overseas and participated in the construction of Pakistan's White Oil Pipeline Project, the Sino-Kazakh Oil Pipeline and the Zhanazhol-KC13 gas pipeline.

Chart 3: CCNG corporate chart



Source: Company

Rich gas sources. China Oil and Gas Group and its JV with CPP, CCNG have secured multi-sources of natural gas, including the Qaidam-Lanzhou gas transmission pipeline (澀寧蘭管綫), Zhong County – Wuhan pipeline (忠武輸汽管道) and West-to-East gas transmission pipeline. Besides, the group is developing its own LNG plants, which should start operation between 2008 and 2009, further expanding its gas sources.

Highly integrated business. The group operates natural gas projects in cities via CCNG and CNG refill stations on its own. The two segments are highly related to each other. With city natural gas projects in Qinghai, Hunan and Shandong, the company can secure large volumes of gas from major national gas transmission trunk lines and feed some of it to its CNG stations. After its LNG plants come on stream, they will meet some of the group's gas requirements.

Strong support from partner. CCNG can capitalize on CPP's advanced pipeline construction technology in the development of its projects, while CPP's support allows CCNG and China Oil and Gas to identify and secure lucrative green field projects. The group can also share CPP's expertise in pipeline network management and, with CNPC's backing, secure gas sources, which are getting scarce in the country.

Acquisition driven growth. The group plans to develop three to four city natural gas projects and CNG station operating rights provided that the projects meet the following criteria: 1) have a stable gas source; 2) are located in the region with strong industrial demand and 3) are reached by LNG trailers. Residential households account for only a small portion of the Group's market, and installation and construction fees are just a minor revenue source. To expand its gas sources and allocate them more efficiently, as well as increasing its revenue stream, the group is setting up three LNG plants and will establish its own fleet of LNG trailers.

Backdrop of the CCNG establishment. CPP is possibly China's strongest natural gas distributor thanks to its pipeline development and construction experiences and the fact that its parent, CNPC (also the parent of PetroChina, which controlled about 78.4% of China's natural gas production volume in 2006) controls gas sources. To capitalize on its technical and gas source access advantages and capture opportunities in the downstream gas distribution business, CPP formed a Sino-foreign JV with predecessors of China Oil and Gas called China City Natural Gas Co, Ltd ("CCNG"), in 2002 to start its piped city gas business. CCNG has become an integrated city gas operator with projects in Qinghai, Hunan, Shangdong. However, due to management philosophy differences with the previous executive team of COG, CCNG's development stalled between 2004 and 2006, until Chairman Xu (許鐵良先生) and its new management stepped in. With CPP's strong support, CCNG is ready for further expansion.

Tie up with CPP & CNPC. Since Mr. Xu stepped in, Mr. Su (蘇士峰), CPP's chairman, has became the chairman of CCNG, and Mr. Qu (曲國華) has been appointed the CEO of China Oil and Gas. The group will increase its stake in CCNG to 51.0% from 50.0% by injecting HK$20.0m into CCNG. This will allow it to fully consolidate CCNG's numbers into its accounts.

CCNG's projects. CCNG operates natural gas projects in five cities in China - Xining (Qinghai), Liling (Hunan), and Qingyun, Binzhou and Huimin (Shangdong Province). The Xiling project is its flagship and major revenue contributor.

Xining project. CCNG's 80.0%-owned Xining project started operation in May 2001. The company is a sole natural gas distributor in the city. It is also engaged in the construction and maintenance of pipeline networks, processing and pressure regulating stations, provision of compressed natural gas to vehicles through its CNG stations and manufacturing of regulating equipment. At end-2006, Xining had 2.1m residents and the city covered 7,665.0 m^2. In 2006, its GDP grew 14.5% YoY to RMB28.2b.

Strong execution. The project is CPP's first city distribution venture. Started in July 2000, with main infrastructure completed in May 2001, its average certified quality reached 95.0%, while the welding of its pipeline reached 90.4%. Its safety quality reached 100.0%. In May 2002, the project was awarded the ISO9001 certificate for its superior quality and management.

Well-developed pipeline network. Its pipeline network of more than 600.0km supplies natural gas to 80,000 households, 40 industrial users and more than 100 restaurants in the city. The project company has also modified boilers and blast furnaces in the city from coal-fired to gas-fuelled. The natural gas coverage ratio in Xining reached 97.0% by end-2006. The city's natural gas consumption surged at a five-year CAGR of 83.6%, from 23.0m m^3 in 2001 to 480.0m m^3 in 2006. The switch to natural gas has substantially lowered air pollution, with sulfur dioxide (SO2) emissions down 12.0%, ash emissions down 23.4% YoY in 2004, and air quality rate at 76.5% in 2004 from 42.0% in 2001, according to the city's environmental monitoring station. Zhengzhou Gas (8099 HK, HK$1.12, NR) is a close comparable to the Xining project. It operates a 75.0km long pipeline network and seven CNG stations, serving a population of 7.0m in Zhengzhou. It sold 286.2m m3 of natural gas in 2006, 33.4% less than Xining, and the natural gas coverage ratio in Zhengzhou was below 10.0% at end-2006.

Chart 4: CCNG city natural gas projects

Source: Company

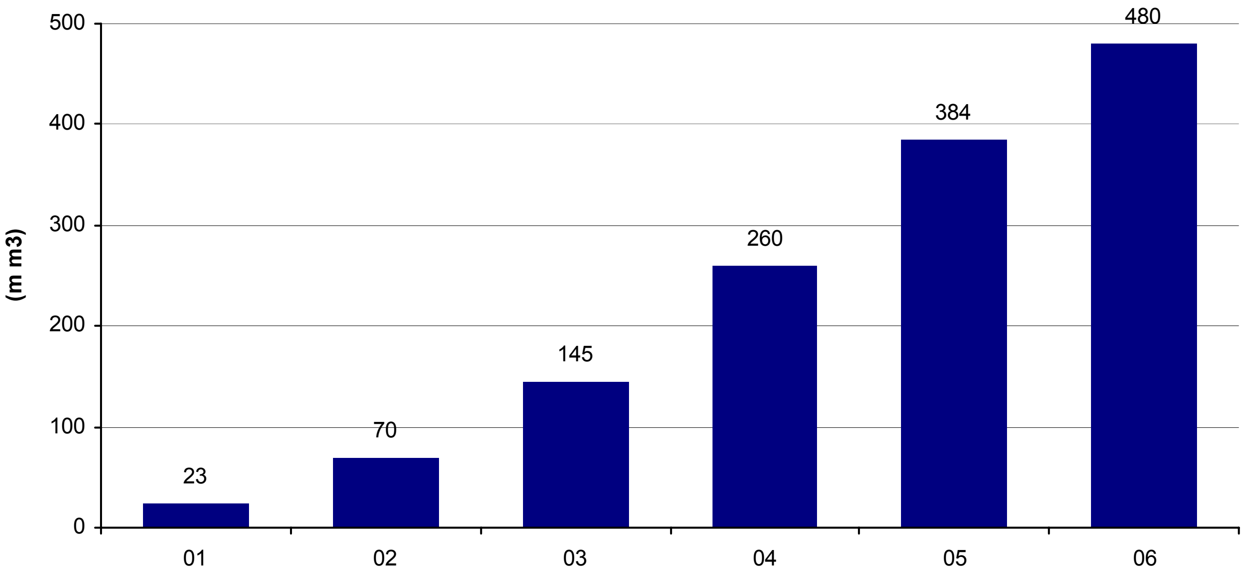
CNG stations. The company has converted more than 6,000 automobiles in Xining into hybrid vehicles (powered by gasoline and compressed natural gas), including more than 3,000 taxis (about 50.0% of the city's total) and more than 3,000 buses (almost the entire bus fleet). Currently, it operates two CNG stations in the city, with a daily supplying capacity of 10,000-20,000 m^3. It is also the sole CNG wholesaler in town, serving five CNG stations owned by third parties.

Stable gas source. The Xining project is fed by the Sebei natural gas field (澀北氣田) situated in the eastern part of Qinghai's Qaisam Basin. Xining is also under the coverage of Qaidam-Lanzhou gas transmission pipeline (澀寧蘭管線), one of the major truck lines in Western China. With the gas field operator, Qinghai Oilfield Co, pledging to supply gas for 40 years, the city has secured a very stable gas source.

Pilot project in China. The Xining project is one of China's few highly-integrated city natural gas distribution projects that combine pipeline networks and CNG stations. It comprises five systems (pipeline management, natural gas dispatch, pipeline repair and maintenance, emergency center and customer service center) to ensure smooth operation and serves as a model and training ground for many natural gas distributors and related enterprises. In recognition of its success in increasing the natural gas penetration rate and profitability, the company was awarded the title of an "Excellent Enterprise" by the China Enterprise Confederation. We expect all CCNGC's projects to eventually replicate the Xining model.

Focus on industrial users - Liling city natural gas project. Liling city natural gas project is 40.0% owned by CCNG. Situated in Hunan province, Liling is China's major export-oriented ceramic manufacturing base. Thanks to robust demand from industrial users there, the project's natural gas sales volume per day has doubled to 300,000m^3 in 1Q 2007 from 150,000m^3 in 2006. The project company sold about 90% of its gas to around 20 industrial users, mostly ceramic producers. Efficient and clean and allowing more temperature control, natural gas is preferred by ceramic factories and is becoming their major energy source.

Chart 5: Gas consumption in Xining



Source: Company

Boost to Liling. The special discounts offered to industrial users to encourage them to use natural gas will expire in phases between 2007 and 2008, thus, improving the profitability of the project. The project sources its natural gas from Zhong County – Wuhan pipeline (忠武輸汽管道). As local gas consumption increases, CCNG can secure more gas from the pipeline. It plans to increase its stake in the project to 60.0% from 40.0%, which should enhance its profitability by increasing the group's share of Liling's profit. CCNG intend to develop Liling into a highly integrated gas system like Xining.

Building presence in Shandong. With a population of 93.1m and annual GDP growth of 14.7% in 2006, Shandong is one of China's most affluent provinces. It is also a major industrial base in Northern China, with its industrial production up 23.6% YoY in 2006. Currently, the group operates three city natural gas projects there, in Qingyun, Binzhou and Huimin via CCNG. It also operates two CNG stations in Binzhou and one in Qingyun. Insufficient financial resources have limited the group's development in the province. The Cangzhou-Zibo pipeline is Shandong's major gas source. CCNG currently has three city natural gas projects in Shandong, and plans to expand in Shandong by acquiring three more industrial-user oriented city gas projects along the Cangzhou-Zibo Pipeline (蒼州淄博管線). Should the group's capacity in the province reach critical mass, it will be able to secure more gas and boost its gas supply in Shandong, paving the way to achieve its target of becoming the province's major gas supplier and operator.

Qingyun and Binzhou CNG stations. The maximum annual supplying capacity of city natural gas projects in Qingyun and Binzhou is estimated at 140.0m m^3 per annum, collectively. Meanwhile, the maximum annual supplying capacity of Qingyun and Binzhou CNG stations is estimated at 30.0m m^3, collectively. CNG stations in Qingyun and Binzhou share the same gas source, the Cangzhou-Zibo pipeline, as projects in their respective operating regions. The Qingyun CNG station is situated next to the 165 National Highway and close to Dezhou (德州), one of China's major manufacturing bases. It serves mainly high-volume industrial users and the demand is rising fast. Binzhou is one of Shandong's major petrochemical-manufacturing bases located near China's third largest mining zone of Shengli Oilfield. CCNG is currently building its own processing station with pipeline directly connected to gas sources, which should be completed by end-2007. After that, the company will no longer need to pay processing fees to third parties.

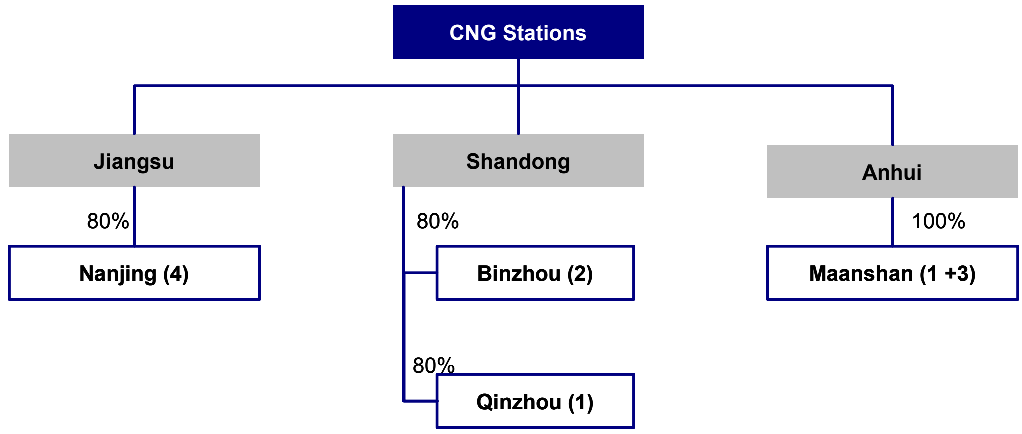
Chart 6: CNG stations location

Source: Company

Mother station in Maanshan. Maanshan Gao Jia CNG Main Processing Station in Maanshan, Anhui province, is one of few CNG stations directly connected to China's West-to-East natural gas transmission artery. It is expected that no other processing stations with direct links to the national trunk line will be approved in the future, given the government's policy of controlling the allocation of gas resources on a geographical basis. Launched in March 2007, the main processing station sources gas from the Manashan section of the West-to-East pipeline. The station has secured 30.0m m^3 of gas for 2007 and 40.0m m^3 for 2008. Currently, the Maanshan section of the West-to-East pipeline has only two direct connections, one to the main processing station and one to Nanjing HK & China Gas Co. Ltd., the city's natural gas operator owned by HK& China Gas (3 HK, HK$16.48, NR). Currently, the main processing station is wholesaling natural gas to China Resources, which has a CNG station in Nanjing supplying gas to a local bus company, and Nanjing HK & China Gas and Maanshan HK & China Gas. Once completed, the company's other CNG stations in Anhui and Nanjing will also be served by the main processing station.

Maanshan CNG stations. Three CNG stations in Maanshan are currently under construction and are expected to come on stream by end-2008. The group's refill stations will mainly serve public transportation operators and industrial users in the Maanshan Development Zone, which houses Mengniu Dairy (2319 HK, HK$25.65, BUY), Yurun Food (1068 HK, HK$9.52, NR), Anhui Hualing Automobile (CAMC Automobile) and Sinotruck, etc. Maanshan's daily demand is estimated atleast 400,000m^3 and rising rapidly. Maanshan Iron (323 HK, HK$6.33, NR) produces coal gas on its own, but for internal consumption only.

Chart 7: CNG station structure



Source: Company

CNG stations in Jiangsu. Four CNG stations in Nanjing are under construction; two of them will come on stream by end-2007 and two by mid-2008. Nanjing's natural gas demand is estimated at least 1.6m m^3 per day currently and is growing rapidly. The CNG stations in Nanjing serve public transport operators and industrial users. There are four third party-owned CNG stations in Nanjing mainly serving their own specific clients only i.e. the bus company. Another two third party owned CNG stations in the city are under construction.

Huge demand from public transport operators. About 50.0% of Nanjing's 5,000 buses and 18.0% of its 10,000 taxis have been transformed into hybrid (both fuel by gasoline and CNG) or CNG-fuelled vehicles. Buses consume 80.0m^3 of CNG per day each and taxis 30.0m^3. In terms of fuel consumption per km, CNG has a slightly better energy efficiency than gasoline but its price is 81.3% lower. It is estimated that taxi drivers can increase their income level by 70.0% to 100.0% by adopting CNG as fuel. In addition, the local government has launched policies to encourage the usage of CNG. Taxi owners who convert their vehicles to CNG can enjoy vehicle registration fee exemption for one year. Currently, the group is supplying gas from its Maanshan processing station to China Resources bus refilling station in Nanjing. It has also entered an agreement with one of the city's bus operators to supply 25,000m^3 of gas per day. With only four CNG stations (third-party owned) in town and only one open to the public, the CNG coverage ratio is low. With six more stations (two owned by third parties) slated for completion, more public transport operators will adopt CNG and boost demand.

Industrial users - high potential market. Demand for gas from industrial users is set to surge in Nanjing as the local government has prohibited the usage of coal as fuel in manufacturing plants to control ash and SO2 emissions. Most of Nanjing's manufacturers adopted LPG as their energy source and only 5.0% of them use natural gas as fuel. Although the kcal of LPG is about 1.3x higher than that of natural gas, LPG cost per m^3 is about 71.9% higher than that of natural gas. Thus natural gas is a prefect substitute for LPG. In order to tap into the industrial users market, the group is setting up a station in the Lishui Economic Development Zone (溧水經濟開發區), located along two highways connecting Anhui and Jiangsu, 30 minutes away from the Nanjing airport.

Upstream expansion. To secure gas sources for its expanding downstream gas distribution operations, as well as increase revenue and lower gas procurement costs, the group will set up three LNG production plants in Xining, Qinghai province; Shanxi province; and Heilongjiang province or Tangshan city, Hebei province. The plants will be developed in phases. In Phase I (to be completed by end-2008) each will have a production capacity of 250,000.0m^3/day and in Phase II (ready by 2010) 500,000.0m^3/day.

Xining LNG plant. The group's LNG plant in Xining with an annual production capacity of 91.3m m^3 will commence operation by mid-2008. It will be equipped with advanced production facilities and adopt the "expansion and contraction" method to produce 20.0% of its annual LPG output. It will utilize the pressure of the Qaidam-Lanzhou gas transmission pipeline to cool and condense natural gas into LNG, rather than coal-fired electricity, which should keep its production costs low.

Second and third LNG plants. Construction of an LNG plant in Shanxi Province will commence soon. It may utilize gas other than natural gas, such as coal-bed gas as the raw material. The company will build its third LNG plant in either Heilongjiang province or Tangshan city. In Heilongjiang, gas can be sourced from Qingshen Gas Field in Daqing, which has proven reserves of 100.0b m^3. In Tangshan, gas can come from the newly founded Jidong Nanpu Oilfield, with proved original natural gas reserves of 140.1b m^3. If all three plants become operational (with an annual output of 547.5m m^3 of gas), the group will become China's second largest LPG producer after Xinjiang Guanghui Industry Investment (Group) Co. It is estimated by the end of 2010, the group's LNG plants can satisfy 12.3% of its total gas requirement.

Trailer fleet. Since natural gas can be condensed by 625.0 times by liquefaction and LPG is sensitive only to temperature but not pressure, it is economical and safe to transport. The group's sources of gas will increase when its LNG plants commence operation. In order to transport and allocate its LNG efficiently, the group would build a fleet of 80 LNG trailers and 20 CNG trailers, with a maximum daily transportation capacity of 525,000.0m^3, assuming each tanker stores 3,500.0m^3 of LNG.

Driver 1: More CNG stations to be launched. In addition to city natural gas projects in Xining, Liling, Qingyun and Binzhou, and the Maanshan processing station, the company will launch two CNG stations in Nanjing by end-2007. The stations will not provide any meaningful contribution to the group until FY12/08F. We expect that the group's another two CNG stations in Nanjing, three in Maanshan, one in Qingyun and two in Binzhou to commence operation and provide contribution in FY12/08F. The group's LNG plant in Xining with its annual production capacity of 91.3m m^3 is expected to come on stream in mid-2008. Another two LNG plants with the same capacity are expected in 2009. After this, the group's LNG plant capacity will increase to 182.5m m^3 each.

Driver 2: Acquire more projects in Shandong. Should the group add three more city natural gas projects in Shangdong Province, its gas sales volume in Shandong's city natural gas projects would increase at a three-year CAGR of 146.6% to 300.0m m^3 in FY12/10F from 20.0m m m^3 in FY12/07F, assuming that the group can get most of the natural gas transmitted by the Cangzhou-Zibo pipeline.

Driver 3: Boost to Liling. 1) Gas sales volume in Liling is expected to increase at a three-year CAGR of 18.6% to 200.0m m^3 in FY12/07F from 120.0m m^3 in FY12/10F on robust demand; 2) Special discounts offered to industrial users there will expire gradually by end-FY12/08F. The ASP/m^3 is expected to increase to RMB1.80 in FY12/08F from RMB1.56 in FY12/07F and 3) The group will increase its stake in Liling city natural gas project to 60.0% from 40.0% by the end of this fiscal year, allowing it to fully consolidate the project's accounts into its own.

Driver 4: CCNG – potential subsidiary. The group increased its stake in CCNG from 50.0% to 51.0% in May 2007, allowing it to consolidate CCNG's accounts into its own.

Driver 5: LNG sales - a new source of revenue. We expect the group to sell to third parties 41.6% of its LNG output in FY12/09F and 70.8% in FY12/10F, becoming a new revenue source for the group.

Driver 6: CNG stations acquisition. The group will acquire three to four CNG stations between FY12/07F and FY12/09F. We have not factored in this in our earning forecasts.

Driver 7: Gas price hikes. The Chinese government is considering a new gas pricing mechanism under which the authorities will set an average consumption volume of natural gas per capita and any amount exceeding it will be subject to a higher tariff. Given the robust demand for natural gas in the country and surging production costs, as well as the huge price discrepancy between domestic and international gas prices, the natural gas price in China is expected to increase but we have yet to factor any increases in our earnings forecasts.

Earning forecasts, target price and recommendation. We expect the group's earnings to grow at a three-year CAGR of 56.5%% between FY12/07F and FY12/10F. We haven't factored in gas price increases and the contribution from CNG stations slated for acquisition. Assuming a 7.0% WACC and 1.0% terminal growth rate, we arrive at our DCF-based target price of HK$2.27, representing an upside potential of 63.5%. We initiate coverage with BUY recommendation.

Table 1: DCF valuation

Project	Effective interests (%)	NPV (HK$m)
Xining city natural gas project	41	4,497.6
Liling city natural gas project	31	697.6
Shandong city gas projects	50	1,462.2
Qingyun CNG station	80	206.2
Binzhou CNG stations	80	271.5
Maanshan processing station	100	194.3
Maanshan CNG stations	100	1,271.4
Nanjing CNG stations	80	666.5
LNG processing plants	69	886.8
Total NPV (HK$m)		*10,154.1*
NPV per share (HK$)		*2.27*

Source: SBI E2-Capital

Table 2: Free cash flow projection

Project (HK$m)	07F-10F	11F-14F	15F-18F	19F-22F	23F-26F	27F-28F
Xining city natural gas project	694.2	1,459.9	1,472.9	1,707.6	1,921.9	1,049.6
Liling city natural gas project	204.5	495.0	532.1	674.4	789.0	443.5
Shandong city gas projects	251.0	601.0	505.4	533.3	532.9	266.3
Qingyun CNG station	34.8	78.6	34.4	86.7	86.4	43.0
Binzhou CNG stations	32.7	87.0	50.6	113.4	122.6	65.0
Maanshan processing station	52.0	58.8	11.8	55.9	55.6	27.6
Maanshan CNG stations	119.3	230.1	183.2	227.2	226.9	113.3
Nanjing CNG stations	146.2	245.7	198.7	242.8	242.4	121.1
LNG processing plants	(1,217.7)	808.0	808.0	808.0	808.0	404.0
Total	317.1	4064.1	3797.1	4449.4	4785.7	2533.4

Source: SBI E2-Capital

Table 3: Gas sales projection

Project (m m3)	07F	08F	09F	10F
Xining city natural gas project	480.0	494.4	509.2	524.5
Liling city natural gas project	120.0	150.0	180.0	200.0
Shandong city gas projects	20.0	100.0	200.0	300.0
Qingyun CNG station	-	11.7	14.6	14.6
Binzhou CNG stations	-	15.0	15.3	15.6
Maanshan processing station	30.0	40.0	40.0	40.0
Maanshan CNG stations	-	20.0	100.0	100.0
Nanjing CNG stations	-	47.0	100.0	100.0
LNG processing plants	-	45.8	273.8	547.5
Total	**650.0**	**923.8**	**1,432.9**	**1,842.2**

Source: SBI E2-Capital

Undemanding valuation in terms of PEG. In our view, P/E ratio is the most appropriate valuation benchmark for the group, given its high growth nature. Besides, unlike other HK-listed gas distributors who derive most of their revenue and earnings from one-off connection fees, the group's connection fee income is just a minor source of its revenue and operating profit. Its earnings quality and transparency is high because gas sales generate the bulk of its revenue. HK-listed gas distributors are trading at an average two-year forward PEG of 2.6x. Trading at FY12/08F PEG of 0.7x, the group's valuation is not stretched. Valuations of downstream natural gas assets in China are inflating, in our view, as demonstrated by the Panva/HK & China Gas acquisitions in 1Q 2007. Panva Gas (1083 HK, HK$4.20, NR) acquired 10 natural gas projects and the outstanding shareholders loans from HK & China Gas (3 HK, HK$16.48, NR) for HK$3.2b, representing a FY12/05A P/E of 147.0x and a P/NAV of 40.0x, respectively.

Table 4: Peer group comparison

Company name	Ticker	Year End	Currency	Price	Market Cap (US$m)	P/E (x) 1-yr forward	P/E (x) 2-yr forward	PEG (x) 2-yr forward
Panva Gas	1083 HK	Dec	HKD	4.2	1,048.0	18.4	14.8	11.5
China Gas	384 HK	Mar	HKD	2.4	961.7	34.2	23.4	1.7
Zhengzhou Gas	8099 HK	Dec	HKD	1.5	235.2	16.0	12.1	1.9
Xinao Gas	2688 HK	Dec	HKD	10.2	1,274.6	21.2	18.1	(4.0)
Average						*23.6*	*18.2*	*2.6*

Source: Bloomberg

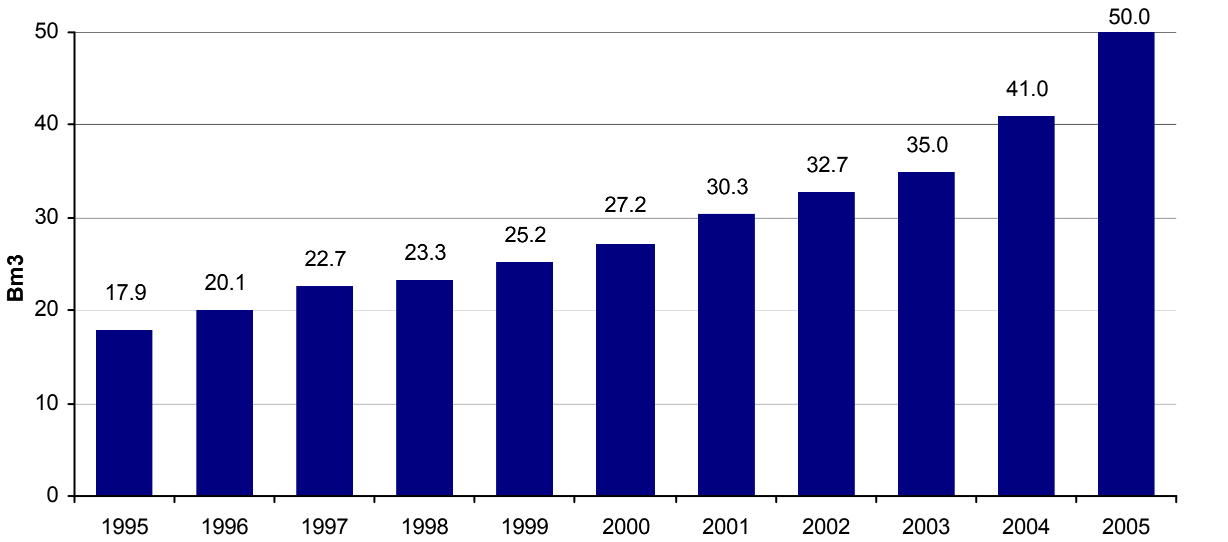
Gas distributor, not a pipeline builder. Connection fee income accounted for 45.7% and 89.5% of China Gas' s (384 HK, HK$2.39, SELL) FY3/06A revenue and operating profit, respectively, and for 40.0% and 74.9% of Xinao Gas's (2688 HK, HK$4.62, NR) FY12/06A revenue and operating profit. Connection fees are made of one-off payments by residential households. It is estimated that the gross profit margin of pipeline connection can be as high as 70.0%. However, the average gross profit margin of gas sales is estimated at below 30.0%. Thus, once the pipeline is completed and distribution starts, the project's profitability will drop substantially. Since gas sources in China are getting scarce, many gas distributors find it difficult to get enough gas to supply to their customers and are forced to pay high prices, or risk having no gas at all. The Guangdong Price Bureau announced on 26 December 2006 that gas distributors in the province would no longer be allowed to collect one-off connection fees when they connect new users. Implementing such measures nationwide will erode earnings and free cash flow of gas distributors who depend on connection fee income but will have a limited impact on China Oil and Gas as its connection income is expected to account for only 8.4% of its FY12/07F revenue and for 5.2% in FY12/08F. The group treats pipeline connection as a supplemental service and adopts the cost-plus model to determine connection fees. The gross profit margin of its pipeline construction division is estimated at below 20.0%.

Natural gas reserves in China. Natural gas is a gaseous fossil fuel consisting primarily of methane with significant quantities of ethane, butane, propane, carbon dioxide, nitrogen, helium and hydrogen sulfide. It is found in oil fields and natural gas fields, and in coal beds. According to the British Petroleum Statistical Review of World Energy, between 1995 and 2005, global natural gas proven reserves increase at a 10-year CAGR of 2.3% to 179.8 trillion m^3 from 143.4 trillion m^3, while China's increased at a 10-year CAGR of 3.5%, to 2.35 trillion m^3 from 1.67 trillion m^3.

Newly found gas reserves in China. Sinopec found 356.0b m^3 of proved recoverable natural gas reserves in Puguang gas field situated in the eastern part of Sichuan province between 2005 and 2006. With the maximum production capacity of 10.0b m^3 per annum, production at Puguang gas field is expected to commence next year. In May, PetroChina announced that it found a large oilfield with reserves reaching 1,020m tons at Jidong Nanpu Oilfield, located in shallow waters of Bohai Bay, Tangshan, Hebei Province. The new discovery includes proved reserves of original oil of 405.1m tons, probable reserves of 298.3m tons, possible reserves of 202.2m tons and proved reserves of original natural gas of 140.1b m^3.

China natural gas production. China's natural gas production increased at a 10-year CAGR of 10.8% to 50.0b m^3 from 17.0b m^3 between 1995 and 2005, due to gas discoveries in Sichuan provicne, Xinjiang Autonomous Region and Shanxi province, and strong demand for clean energy. In 2006, China's natural gas production increased 19.0% YoY to 59.5b m^3 and is expected to rise 21.0% YoY to 72.0b m^3 in 2007. China ranked as the world's 11th largest gas producer in terms of volume last year. The Chinese government plans to increase the country's natural gas output to 92.0b m^3 by 2010. With a production volume of 45.0b m^3 in 2006, PetroChina (857 HK, HK$10.22, NR) was the largest natural gas producer in China, accounting for 76.0% of the country's total natural gas production. Sinopec (0386 HK, HK$8.07, NR) and CNOOC (883 HK, HK$7.43, NR) accounted for 12.2% and 8.6%, respectively. Between 2002 and 2006, natural gas output of PetroChina, Sinopec and CNOOC increased at a four-year CAGR of 27.0%, 9.3% and 16.2%, respectively.

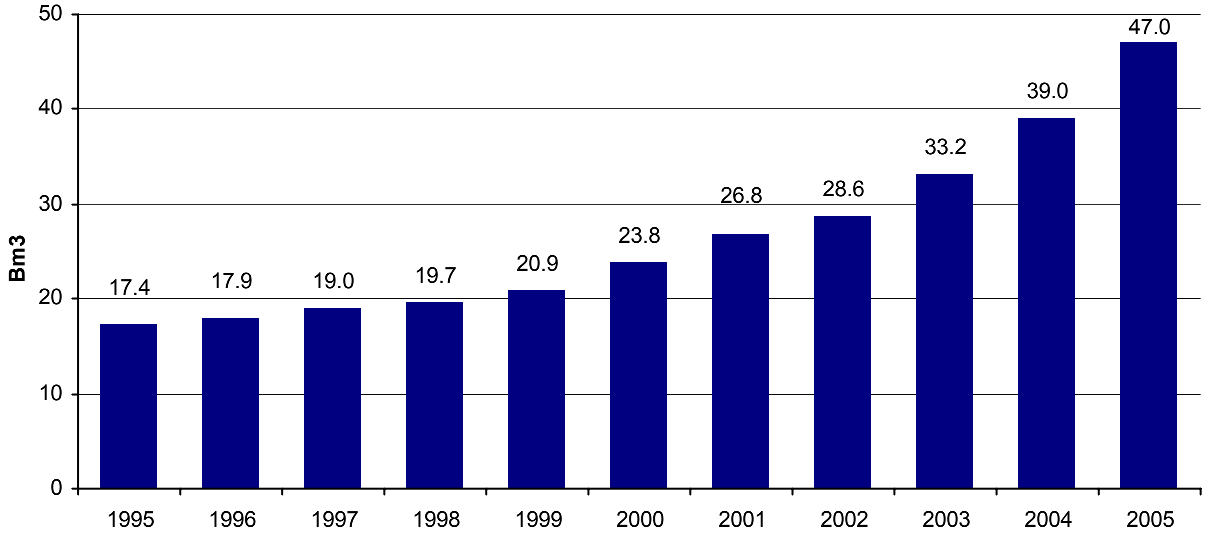
Chart 8: China gas production



Source: SBI E2-Capital

Natural gas consumption in China. With primary energy consumption at 2,233.2m tons of standard coal equivalent in 2005, China is the world's second largest energy consumer after the U.S. With abundant coal resources, China has been relying on coal as a major energy source. In 2005, coal accounted for 68.9% of the country's total primary energy consumption and natural gas for only 2.9%. The proportion of natural gas in China's total primary energy consumption rose from 1.8% in 1996 to 2.9% in 2005 and the government aims to increase it to about 6.0% by 2010 and 10.0% by 202, equal to an annual consumption of 110.0b m^3 and 220.0b m^3, respectively. Natural gas consumption increased at a 10-year CAGR of 10.4% between 1995 and 2005, from 17.4b m^3 to 47.0b m^3 on strong demand for clean energy sources and improved gas transmission infrastructure. However, natural gas consumption per capita was 25.0 m^3 per annum in 2005, compared with the world's average of 403.0 m^3 per annum. The industrial sector was the largest consumer of natural gas in China, accounting for 74.0% of the total in 2004 and 73.8% in 2005, followed by households, which accounted for 17.5% in 2004 and 16.8% in 2005.

Chart 9: China gas consumption



Source: SBI E2-Capital

Natural gas transmission pipeline in China. As of end-2005, China had 28,000.0km of natural gas transmission pipelines, with 17,000km with a diameter of 426.0mm or more. The length is expected to increase to 36,000km by end-2010.

Strong management background.

- **Chairman Xu Tieliang (許鐵良),** aged 43, graduated from the Xi'an Shiyou University majoring in accounting and finance and is a registered certified public accountant and lawyer in China, who worked as an accountant in subsidiaries of CNPC. He also worked at Shengli Oilfield. He was an independent director of Hua Xia Bank, listed on the Shanghai Stock Exchange, Shandong ShengLi, listed in Shenzhen Stock Exchange, and Leadership Publishing Group Limited (now known as SMI Publishing Group Ltd), listed on the GEM board of the HKEX. He was also director at various companies specializing in oil and energy investments and legal and management consultancy services. Mr. Xu worked in various legal departments of China's government, as vice chairman and general manager of China Legal Service (Hong Kong) Limited and vice chairman of China Law Magazine Limited. He has extensive experience in investments, mergers and acquisitions, legal, accounting, financial and corporate governance aspects.

- **CEO Qu Guohua (曲國華),** aged 55, graduated from South West Petroleum University in 1987 and Air Force Logistic Institute in July 2000. He is a senior engineer, working for China Petroleum Pipeline Bureau as a pipeline expert. Mr. Qu is also a representative of the 13th Session of the National People's Congress of Xining, a member of Qinghai Provincial Committee of the Chinese People's Political Consultative Conference. He was managing director of China City Natural Gas Co. (CCNG), a 51% controlled entity of the China Oil and Gas. He has worked in CNPC subsidiaries since 1968, holding post of chief operating officer and deputy operating manager. He is responsible for organizing and supervising ground surface construction of CNPC's oilfields and construction of long distance pipelines. He participated in major pipeline construction projects in China, including Shanghai's natural gas distribution and supply, Suzhou Industrial Park's water and gas pipeline construction and a large oil storage tank in Zhoushan. He has extensive experience in the petroleum and gas industries and expertise in oil and gas pipeline construction.

Corporate deals. 1. February 2006 - current major shareholder Sino Advance acquired 321.0m shares from Kingston Finance for HK$38.0m, representing 17.8% of the group's total issued share capital during that time.

2. September 2006 - the group raised HK$64.2m through a placement of 540.0m new shares at HK$0.12 each.

3. November 2006 - the group acquired Accelstar for HK$58.5m (HK$48.0m in cash and an issue of 175.0m shares at HK$0.06 each). Accelstar invests in and operates CNG gas stations in Qingyun and Binzhou, Shandong.

4. January 2007 - the group raised HK$105.6m through a placement of 360.0m new shares at HK$0.29 each.

5. February 2007 - the group acquired 80.0% in Plentigreat for HK$133.0m (HK$67.0 m in cash and an issue of a two-year term convertible bond worth of HK$66.0m, convertible into 275.0m shares at HK$0.24 each). Plentigreat invests in and operates CNG gas stations in Nanjing, Jiangsu.

6. March 2007 - the group acquired Vast China for HK$196.4m (HK$10.4m in cash and an issue of a two-year term convertible bond worth of HK$90.0m to the vendor, convertible into 375.0m shares at HK$0.24 each; and an issue of 400.0m of new shares to the vendor at HK$0.24 each). Vast China invests in and operates CNG gas stations in Maanshan, Anhui.

7. May 2007- the group raised HK$660.0m through a placement of 550.0m new shares at HK$1.20 each.

SBI E2-Capital Securities Ltd. acted as the Placing Agent for China Oil And Gas Group in December 2006 and May 2007.

P & L (HK$m)	05A	06A	07F	08F	09F
Year to Dec					
Turnover	**200.9**	**369.9**	**812.4**	**1,630.0**	**2,744.1**
% chg	-	*84.1*	*119.6*	*100.6*	*68.4*
Gross profit	61.7	79.6	245.2	505.7	762.9
EBITDA	(60.1)	98.8	191.5	410.1	584.8
Depre./amort.	(7.9)	(10.3)	(6.6)	(52.6)	(83.8)
EBIT	(67.9)	88.5	184.9	357.5	501.0
Net int. income/(exp.)	(2.6)	(7.8)	3.5	3.0	(2.2)
Exceptionals	(56.3)	(7.3)	-	-	-
Associates	-	-	-	-	-
Jointly-controlled entit.	(2.3)	2.0	0.8	-	-
Pre-tax profit	**(129.1)**	**75.5**	**189.1**	**360.5**	**498.8**
Tax	(3.4)	(7.3)	(27.7)	(51.9)	(69.2)
Minority interests	(7.3)	(10.8)	(98.5)	(148.6)	(187.1)
Net profit	**(139.8)**	**57.3**	**62.9**	**160.0**	**242.5**
% chg	-	-	*9.7*	*154.3*	*51.6*
Dividends	-	-	-	-	-
Retained earnings	(139.8)	57.3	62.9	160.0	242.5
EPS (HK$) - Basic	(0.102)	0.060	0.016	0.036	0.054
EPS (HK$) - F.D.	(0.102)	0.060	0.014	0.036	0.054
DPS (HK$)	-	-	-	-	-
No. sh.s o/s (m) - W.A.	1,502.3	1,881.5	3,958.8	4,479.7	4,479.7
No. sh.s o/s (m) - Y.E.	1,502.3	1,881.5	4,479.7	4,479.7	4,479.7
No. sh.s o/s (m) - F.D.	1,734.7	2,519.7	4,479.7	4,479.7	4,479.7
Margins (%)					
Gross	*30.7*	*21.5*	*30.2*	*31.0*	*27.8*
EBITDA	*(29.9)*	*26.7*	*23.6*	*25.2*	*21.3*
EBIT	*(33.8)*	*23.9*	*22.8*	*21.9*	*18.3*
Pre-tax	*(64.3)*	*20.4*	*23.3*	*22.1*	*18.2*
Net	*(69.6)*	*15.5*	*7.7*	*9.8*	*8.8*

Balance Sheet (HK$m)	05A	06A	07F	08F	09F
Year to Dec					
Fixed assets	120.3	123.2	542.0	901.4	1,717.6
Intangible assets	4.9	62.3	333.6	333.8	333.9
Other LT assets	6.3	1.1	13.7	13.7	13.7
Cash	35.8	165.1	338.5	137.6	66.6
Accounts receivable	116.3	96.6	73.1	146.7	247.0
Other receivables	-	-	24.0	24.0	24.0
Inventories	11.9	8.2	3.1	6.2	10.9
Due from related co.s	-	-	-	-	-
Other current assets	17.0	36.1	0.1	0.1	0.1
Total assets	**312.4**	**492.5**	**1,328.1**	**1,563.4**	**2,413.7**
Accounts payable	(42.5)	(95.9)	(81.2)	(163.0)	(274.4)
Other payable	-	-	-	-	-
Tax payable	(3.4)	(8.6)	(13.9)	(25.9)	(34.6)
Due to related co.s	-	-	-	-	-
ST debts	(9.1)	(14.1)	(18.6)	(12.4)	(7.7)
Other current liab.	-	-	-	-	-
LT debts	(73.7)	(38.7)	(20.1)	(7.7)	(500.0)
Other LT liabilities	-	(2.6)	(2.6)	(2.6)	(2.6)
Total liabilities	**(128.7)**	**(160.0)**	**(136.5)**	**(211.7)**	**(819.3)**
Share capital	17.3	25.2	34.3	34.3	34.3
Reserves	153.4	286.2	1,037.6	1,049.1	1,104.7
Shareholders' funds	**170.8**	**311.4**	**1,071.9**	**1,083.4**	**1,139.0**
Minority interest	13.0	21.2	119.7	268.3	455.4
Total	**183.7**	**332.6**	**1,191.6**	**1,351.7**	**1,594.4**
Capital employed	266.5	385.4	1,230.3	1,371.8	2,102.0
Net (debt)/cash	(47.0)	112.2	299.7	117.5	(441.1)

Cash Flow (HK$m)	05A	06A	07F	08F	09F
Year to Dec					
EBIT	(67.9)	88.5	184.9	357.5	501.0
Depre./amort.	7.9	10.3	6.6	52.6	83.8
Net int. paid	(2.0)	(7.7)	3.5	3.0	(2.2)
Tax paid	(1.3)	0.7	(22.4)	(39.8)	(60.5)
Dividends received	-	(3.9)	-	-	-
Gross cashflow	**(63.4)**	**87.8**	**172.5**	**373.3**	**522.0**
Chgs. in working cap.	(124.5)	59.7	13.8	5.1	6.4
Operating cashflow	**(187.8)**	**147.6**	**186.3**	**378.4**	**528.5**
Capex	(16.5)	(21.1)	(426.0)	(412.0)	(900.0)
Free cashflow	**(204.3)**	**126.5**	**(239.7)**	**(33.6)**	**(371.5)**
Dividends paid	-	-	-	-	-
Net distribution to MI	-	-	-	-	-
Investments	(0.1)	-	-	-	-
Disposals	12.1	32.3	-	-	-
New shares	25.0	64.8	660.0	-	-
Others	186.9	(64.4)	(232.9)	(148.6)	(187.1)
Net cashflow	**19.6**	**159.2**	**187.5**	**(182.2)**	**(558.6)**
Net (debt)/cash - Beg.	(66.6)	(47.0)	112.2	299.7	117.5
Net (debt)/cash - End.	(47.0)	112.2	299.7	117.5	(441.1)

Interim Results (HK$m)	04A	05A	06A
Six months to Jun			
Turnover	**39.0**	**200.9**	**150.8**
% chg	*(74.9)*	*415.7*	*(24.9)*
Profit from operations	(33.7)	(105.1)	54.0
Interest expenses	(1.5)	(3.1)	(1.5)
Associates	-	-	-
Jointly-controlled entit.	-	(2.3)	(2.4)
Pre-tax profit	**(35.1)**	**(110.5)**	**53.3**
Tax	(0.1)	(3.5)	(1.7)
Minority interests	-	(7.3)	(6.6)
Net profit	**(35.2)**	**(139.8)**	**44.91**
% chg	-	-	-
EPS (HK$) - Basic	(0.003)	(0.093)	0.025
DPS (HK$)	-	-	-

Shareholding Structure	Shares o/s (m)	%
Xu Tie Liang	1,096.0	24.5
Lo Chung	291.0	6.5
Public	3,092.7	69.0
Total	**4,479.7**	**100.0**

Background

China Oil and Gas Group is engaged in natural gas distribution and other gas and energy-related services in China. Through its 51.0%-owned joint venture with China Petroleum Pipeline Bureau (CPP, 中國石油天然氣管道局), China City Natural Gas Co (CCNG, 中油中泰), it distributes gas in various cities in China. It also operates its own CNG station networks.

Key Ratios	05A	06A	07F	08F	09F
Net gearing (%)	24.7	Cash	Cash	Cash	29.9
Net ROE (%)	(77.2)	23.8	9.1	14.8	21.8
EBIT ROCE (%)	(24.2)	27.2	22.9	27.5	28.8
Dividend payout (%)	-	-	-	-	-
Effective tax rate (%)	(2.6)	9.7	14.7	14.4	13.9
Net interest coverage (x)	na	11.4	na	na	224.7
A/R turnover (days)	138.9	105.0	38.1	24.6	26.2
A/P turnover (days)	93.0	68.3	39.8	27.3	29.1
Stock turnover (days)	33.6	12.6	3.6	1.5	1.6

Notes: FY04: August 2003 to July 2004; FY05: August 2004 to July 2005; FY06: August 2005 to December 2006