



BUY

Close	Target
HK\$2.50	HK\$3.30

China / Utilities

4 June 2009

YK Lee CFA

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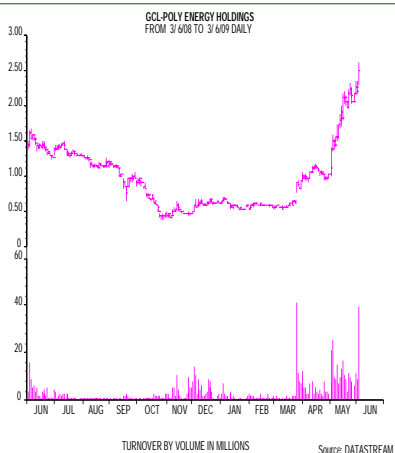
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Key stock data

12-month High / Low	HK\$2.50/0.41
1m avg daily vol	12.01m
Issued shares	1,023m
Market cap	HK\$2,557m
PEG 09-11F (x)	0.6
P/B FY09F (x)	12.4
Net gearing 08A (%)	108
Board lot	1,000
Major shareholder	Zhu Gong Shan (34.47%)

Performance	1 M	3 M	12M
Absolute (%)	125.23	346.43	55.28
Rel (HSI) (%)	98.61	196.34	101.64

Source: Datastream



GCL-Poly Energy (3800 HK)

Gaining steam in China's green energy industry

GCL-Poly Energy (GCL-Poly) (3800 HK), a leading privately owned cogeneration and renewable-energy generator in China, is set to benefit from the government's overwhelming support on environmental-friendly and energy-saving power-generation projects. The firm's biggest earnings driver, in our view, is the potential power-asset injections from its major shareholder. Falling coal costs and its new revenue source from the newly acquired Duolun coal mine should further fuel earnings growth. We forecast a 22% earnings CAGR in 2009-11 thanks to its defensive business model. Thus, we initiate coverage with a BUY rating and set our DCF-based TP at HK\$3.3.

- ◆ **Government policy supports CHP and renewable energy.** The central government has targeted to boost the installed capacity of renewable energy and cogeneration (combined heat and power, CHP) at CAGRs of 108% and 14.5% between 2005-10. As such, the government has implemented a slew of supportive policies to encourage development in these areas. Being a leading CHP generator with increasing exposure to China's new energy sector, GCL-Poly is set to ride on such a preferential policy trend.
- ◆ **Asset injection is the biggest earnings driver.** GCL-Poly had acquired assets from its major shareholder Zhu Gong Shan at reasonable prices, and it plans to acquire more in the future. While we have not factored the likely asset injections into our model yet, earnings may soar more than 100% if the parent's greenfield projects are injected. However, the timeframe and funding source of the asset injection remain the key uncertainties.
- ◆ **A solid green IPP can stand out in turbulent times.** GCL-Poly will be able to withstand the headwinds of the country's waning power demand and overcapacity of power/steam generation on the back of favorable government policies. The decline in coal cost and interest-rate cut also offer GCL-Poly some relief. Upside risks from increasing government incentives in the forms of direct subsidies, tax rebate and higher tariff may emerge.
- ◆ **Relatively undervalued versus traditional IPPs and other new energy plays.** Despite its tiny size, we believe the stock should not trade at such a huge discount to traditional IPPs such as China Resources Power (836 HK) given its green properties in CHP. With a sound track record and solid business model, GCL-Poly's valuations should be able to catch up with other new energy stocks (e.g., China Everbright International (257 HK)) that have a short or even no track record. We have adopted the DCF methodology to derive our HK\$3.3 TP since this power utility enjoys stable cash flow. We initiate coverage with a BUY.

Key Financials

Year to 31 Dec	2007	2008	2009F	2010F	2011F
Revenue (Rmb m)	1,845	3,693	3,076	3,613	3,913
Growth (%)	103	100	-17	17	8
Net profit (Rmb m)	(267)	131	178	232	266
Growth (%)	na	na	36	30	14
EPS (Rmb)	(0.571)	0.135	0.177	0.227	0.260
Growth (%)	na	na	31	28	14
P/E (x)	na	16.3	12.4	9.7	8.5
P/B (x)	0.9	0.9	0.7	0.7	0.6
EV/EBITDA	12.9	8.1	8.4	7.5	7.1
Yield (%)	0.0	0.9	1.2	1.5	1.8

Source: company data and Core Pacific - Yamaichi

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Growth prospects of CHP and renewable energy in China

China is facing energy imbalance and environmental problems. In 2005, coal accounted for 69% of total non-renewable-energy consumption in China. Such ratio was much higher than the global average of 27%. In addition, China's energy intensity (energy consumption per unit of GDP) was 8.4toe (ton of oil equivalent) per US\$10,000 unit of GDP, much higher than the global average of 2.5toe. The government regards such an imbalanced energy-consumption structure as detrimental to the country's economic, environmental and social development in the long run.

Setting energy conservation and green targets by the government. Under the 11th Five-Year Plan, energy intensity is aimed to be cut 20% to 9,800ton standard coal per unit of GDP in 2010 from the 2005 level of 12,200ton per unit of GDP, while emissions of major pollutants is targeted to be reduced by 10%.

Measures to achieve targets by 2010. In order to achieve these targets, NDRC plans to raise the weighting of renewable-energy (including hydro, wind, solar, biomass, methane, geothermal and tidal power) consumption to 10% of total energy consumption by 2010 and 15% by 2020. Under the Power Industry 11th Five-Year Plan, the government targets to boost installed capacity by fuel type as shown in Table 1. Installed capacity of renewable energy will have the fastest 2005-10 CAGR at 108%, followed by 14.5% for cogeneration. A further breakdown of renewable energy is illustrated in Table 2.

Table 1: China aims to raise the weighting of clean and renewable energy

	Installed capacity (2005)		Installed capacity (2010)		Capacity growth 05-10 CAGR%
	GW	Mix % of total	GW	Mix % of total	
Other renewable	1.6	0.3	30.1	4.3	108.3
Cogeneration	70	13.5	120	17.1	14.5
Nuclear	6.8	1.3	10.8	1.5	12.3
Hydro	117.4	22.8	162.5	23.1	8.5
Coal-fired	321.6	62.4	409	58.2	6.2

Source: NDRC

Table 2: Significant growth in renewable-energy capacity in China

	Installed capacity			Capacity growth 05-20 CAGR%	Total investment Rmb bn	Investment cost / kW Rmb
	(2005) GW	(2010) GW	(2020) GW			
Hydro	117.4	162.5	307.4	7.1	1,300	7,000
Wind	1.3	10.0*	30.3	25.5	190	6,500
Biomass	2.0	5.5	30.0	21.3	200	7,000
of which WTE	0.2	0.5	3.0	21.3	na	na
Solar	0.1	0.3	1.8	26.1	130	75,000

* The target was revised up from 5GW to 10GW in Mar 2007

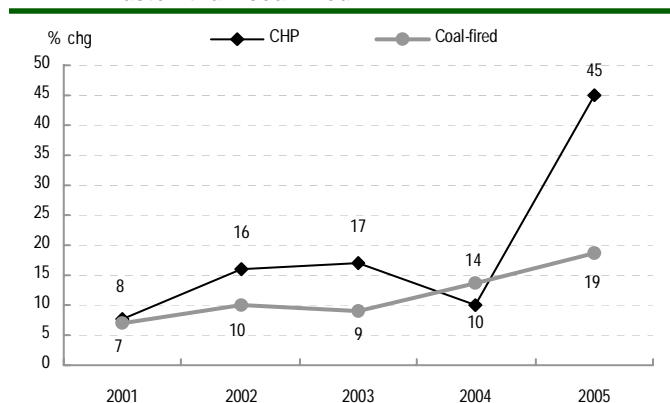
Source: NDRC

Reasons for government support to CHP - Efficiency and environmental friendliness.

To enhance energy efficiency, the government encouraged the development of cogeneration power, also known as combined heat and power (CHP), as the thermal efficiency of cogeneration is 15% to 40% higher than the conventional coal-fired plants, while the thermal efficiency of centralized heat supply system is 50% above scattered heat boilers. Although cogeneration plants operate largely the same way as conventional coal-fired power plants, the former use fuel more efficiently in the power-generation process and emit less carbon dioxide since steam, which would normally be wasted, is redeployed to either generate electricity by a secondary plant or supply heat. In addition, by using steam supplied by the cogeneration power plants, customers do not have to operate their own boilers, which typically emit a high level of pollutants and operate at higher energy-consumption rates and production costs.

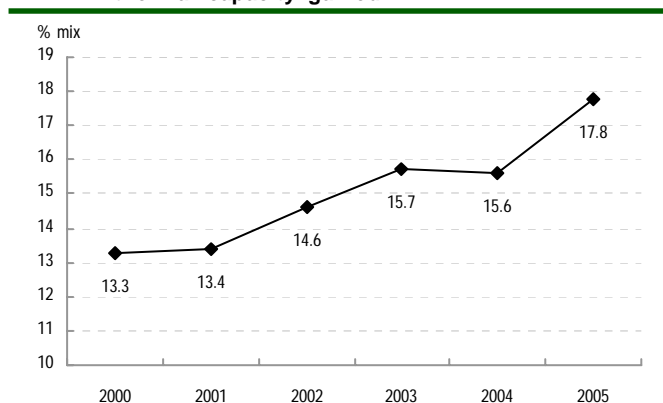
GCL-Poly rides on the CHP and new energy boom

Figure 1 : Installed capacity growth rate of cogeneration was faster than coal-fired



Source: China Electric Power Yearbook 2006

Figure 2 : Shares of cogeneration capacity as % of total thermal capacity gained



Source: China Electric Power Yearbook 2006

Specific plans to develop CHP in China. According to the Energy Development of the 11th Five-Year Plan issued in April 2007, the government plans to support the development of cogeneration plants in industrial zones with heavy heat demand and build >300MW CHP units in highly centralized heat supply areas in large cities. The authority also encourages the construction of circulating fluidized bed (CFB) CHP units, replacement of scattered boiler with a centralized heat supply system and development of fragmented CHP using clean fuel in small-to-medium cities. Meanwhile, according to the 2010 Cogeneration Industry Development Plan and the 2020 Development Target prepared by NDRC's Bureau of Energy in June 2003, total national cogeneration installed capacity will reach 120GW by 2010, of which about 56GW will be for urban consumption and 64GW will be for industrial use. Total national cogeneration installed capacity is expected to reach approximately 200GW by 2020, representing 22% of PRC's total power generation installed capacity.

Goals to be achieved by CHP development plan. By gearing up the development of CHP, the government hopes to achieve the following goals: 1) penetration rate of centralized heat supply should reach 40% by 2010 from 30% in 2005 and 27% in 2002; 2) overall standard coal consumption should be reduced by 35m tons per year; 3) coal consumption per unit generation of thermal power plants should be cut from 370g/kWh in 2005 to 355g/kWh by 2010 and 4) the auxiliary power ratio should decline from 5.9% to 4.5%.

Riding on the aggressive growth target set by the government. Given the government's aggressive expansion plan for CHP and renewable energy as mentioned above, GCL-Poly, one of the largest privately owned IPPs in China with green power generation, is set to benefit from this favorable state policy. GCL-Poly's strategic focus is to develop cogeneration plants with single generator sizes of >300MW, WTE (waste-to-energy), hydropower plants and wind power plants. This capacity expansion plan can be conducted by: 1) organic growth; 2) upgrade of existing plants and 3) asset injection from parent.

Organic growth – Through organic growth, GCL-Poly added 30MW of installed electricity capacity and 61ton/h of steam extraction capacity in 2008. The firm plans to add an additional 6MW generator to the existing Taicang WTE plant in 1H09.

Upgrading work – The firm has applied to the government for a biomass power plant status for the Baoying and Lianyungang Xiexin cogeneration plants after completing the installation and upgrade of biomass boilers. The biomass power plant status would raise the tariffs and utilization hours of those two plants.

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Huge capacity growth potential

Acquisition from the controlling shareholder in the past. Upon the initial public offering in Nov 2007, GCL-Poly acquired the Funing, Puyuan, Xinneng, Beijing cogeneration plants and the Inner Mongolia Huitengliang wind farm project from company chairman Zhu Gong Shan, who holds a 34.47% stake in GCL-Poly, for total consideration of Rmb333m. Following these acquisitions, GCL-Poly owned 17 cogeneration plants and a solid waste incineration plant at end-2007, with an attributable installed capacity of 594.3MW and an attributable steam extraction capacity of 1,562.4ton/h.

Table 3: Growth in power installed capacity driven mainly by organic growth

	Existing interest	2004	2005	2006	2007	2008	2009F	2010F	2011F
		MW	MW	MW	MW	MW	MW	MW	MW
Kunshan Cogeneration 昆山熱電	51.0%	48	48	48	48	48	48	72	72
Haimen Cogeneration 海門熱電	51.0%	30	30	30	30	30	30	30	30
Rudong Cogeneration 如東熱電	100.0%	15	30	30	30	30	30	30	30
Huzhou Cogeneration 湖州熱電	94.8%	30	30	30	30	30	30	30	30
Taicang Poly Cogeneration 太倉保利熱電	100.0%	45	45	45	45	45	45	45	45
Jiaxing Cogeneration 嘉興熱電廠	95.0%		30	30	36	36	36	36	36
Xinneng Cogeneration 鑫能熱電	100.0%				6	21	21	21	36
Fengxian Cogeneration 豐縣熱電	51.0%	30	30	30	30	30	30	30	30
Yangzhou Cogeneration 揚州熱電	51.0%	48	48	48	48	48	48	48	48
Dongtai Cogeneration 東台熱電	100.0%	30	30	30	30	30	30	30	30
Peixian Cogeneration 沛縣熱電	100.0%	30	30	30	30	30	30	30	30
Xuzhou Cogeneration 徐州熱電	75.0%	30	30	30	30	30	30	30	30
Puyuan Cogeneration 濮院熱電	100.0%				21	21	21	36	36
Funing Cogeneration 阜寧熱電	60.0%				30	30	30	45	45
Suzhou Cogeneration 蘇州熱電	51%		360	360	360	360	360	360	360
China Resources Beijing Cogeneration 華潤北京熱電	49%					150	150	150	150
Baoying Cogeneration 寶應熱電	100%		30	30	30	30	30	45	45
Lianyungang Xiexin Cogeneration 連雲港協鑫熱電	100%		30	30	30	45	45	45	45
Taicang Incineration 太倉垃圾發電	100%			6	6	6	12	12	12
Huitengliang 灰騰梁風力發電	100%						49.5	49.5	49.5
Total attributable power installed capacity:		250.5	537.6	543.6	594.3	697.8	753.3	804.5	819.5
Total installed capacity addition :			287.1	6.0	50.7	103.5	55.5	51.2	15.0

Source: Company data & Core Pacific-Yamaichi estimates

Table 4: Growth in steam extraction installed capacity driven by organic growth

	Existing interest	2004	2005	2006	2007	2008	2009F	2010F	2011F
		ton / h	ton / h	ton / h	ton / h	ton / h	ton / h	ton / h	ton / h
Kunshan Cogeneration 昆山熱電	51.0%	160	160	160	160	160	160	200	200
Haimen Cogeneration 海門熱電	51.0%	100	100	100	100	100	100	100	100
Rudong Cogeneration 如東熱電	100.0%	50	50	50	50	50	50	50	50
Huzhou Cogeneration 湖州熱電	94.8%	100	100	100	100	100	150	150	150
Taicang Poly Cogeneration 太倉保利熱電	100.0%	150	150	150	150	150	150	150	150
Jiaxing Cogeneration 嘉興熱電廠	95.0%		100	100	172	172	172	172	172
Xinneng Cogeneration 鑫能熱電	100.0%				30	125	125	125	170
Fengxian Cogeneration 豐縣熱電	51.0%	100	100	100	100	100	100	100	100
Yangzhou Cogeneration 揚州熱電	51.0%	160	160	160	160	160	160	160	160
Dongtai Cogeneration 東台熱電	100.0%	100	100	100	100	100	100	100	100
Peixian Cogeneration 沛縣熱電	100.0%	100	100	100	100	100	100	100	100
Xuzhou Cogeneration 徐州熱電	75.0%	100	100	100	100	100	100	100	100
Puyuan Cogeneration 濮院熱電	100.0%				123	123	123	123	123
Funing Cogeneration 阜寧熱電	60.0%				100	100	100	100	100
Suzhou Cogeneration 蘇州熱電	51%		200	200	200	200	200	200	200
China Resources Beijing Cogeneration 華潤北京熱電	49%				100	100	100	100	100
Baoying Cogeneration 寶應熱電	100%		100	100	100	100	100	100	100
Lianyungang Xiexin Cogeneration 連雲港協鑫熱電	100%		100	100	100	100	100	100	100
Total attributable steam extraction capacity:		835	1,232	1,232	1,562	1,657	1,705	1,725	1,770
Total increment steam extraction capacity:			397	0	330	95	47	20	45

Source: Company data & Core Pacific-Yamaichi estimates

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Asset injection – Most powerful way to boost capacity

Additional projects to be acquired from controlling shareholder. We believe capacity growth through asset injection from the controlling shareholder is the most powerful driver. Zhu still holds a number of large CHP and renewable-energy projects and had granted GCL-Poly the options to acquire Nanjing cogeneration plant, Taicang Harbour, Longgu and Yonghe power plants, among others (details shown in Table 5) before the listing of the company. GCL-Poly also has the right of first refusal for any potential opportunities that may compete with the firm. The option agreement will be void if Zhu and his associates jointly own less than 30% of voting rights in GCL-Poly.

Table 5: GCL-Poly has the right to acquire projects from the controlling shareholder

Type	Name	Fuel	Location	Installed Capacity (MW)	Interest to be acquired	Attributable Installed Capacity (MW)	Commencement of operation
Operation plants to be acquired from Controlling Shareholder	Nanjing	Coal/Sludge	Jiangsu	96.0	100%	96.0	Operating
	Longgu	Coal/Gangue	Jiangsu	110.0	59%	64.9	Operating
	Taicang Harbour	Coal	Jiangsu	2170.0	37%	802.9	Operating
New projects to be acquired from Controlling Shareholder	Lanxi Xiexin	Coal	Zhejiang	21.0	100%	21.0	Expected by 2008
	Baoxin	Biomass	Jiangsu	30.0	100%	30.0	Expected by 2008
	Yonghe	Natural Gas	Guangdong	180.0	100%	180.0	Expected by 2009
	Xuzhou Cogeneration	Coal	Xuzhou	600.0	100%	600.0	Expected by 2009
	Xuzhou Incineration	Solid waste	Xuzhou	24.0	100%	24.0	Expected by 2009
	Total			3,231		1,819	

Source: Company data

Reasonable acquisition price is likely given good track record and promises in IPO. GCL-Poly's IPO prospectus had stated the acquisition pricing criteria: 1) for power plants in operation, the consideration will be fair market valued based on independent valuation; 2) for power plants under development, the amount will not be higher than the NAV of the subject company or investment cost incurred, whichever is lower. The same pricing principle will apply to coal mines and other asset owned by Zhu. Given these clauses, we believe the acquisition prices will be fair to GCL-Poly. With reference to the acquisition made by GCL-Poly after its listing, the purchase prices were largely reasonable to public shareholders. If we compare with China Power New Energy (735 HK), which bought a 40% stake in a gas/oil-fired cogeneration plant in Aug 2007, the prices paid by GCL-Poly seem more attractive (see Table 6).

Table 6: GCL-Poly has good record of purchasing assets from parent at appealing prices.

	Interest to be acquired %	Acquisition Date	Profit / (loss) HK\$'000	Net asset HK\$'000	Attributable profit/ (loss) HK\$'000	Attributable NAV HK\$'000	Consideration HK\$'000	Paid by	FY06 PER x	FY06 PBR x
Acquisitions by GCL-Poly										
Funing	30.6	Dec-2007	8,202	77,400	2,510	23,684	28,044	Cash	11.2	1.18
Suzhou Fuel*	100	Dec-2007	na	16,001	na	16,001	14,062	Cash	na	0.88
Puyuan	100	Dec-2007	-2,552	84,992	na	84,992	95,507	Cash	na	1.12
Xinneng	100	Dec-2007	164	48,368	164	48,368	48,360	Cash	294.9	1.00
Beijing	49	Dec-2007	25,886	202,698	12,684	99,322	145,788	Cash	11.5	1.47
Duolun Coal Mine	55	Aug-2008	na	175,909	na	96,750	96,750	CB	na	1.00
Acquisitions by China Power New Energy (735 HK)										
Dongguan Dong Xin	40	Aug-2007	na	69,371	na	27,748	408,400	Cash + shares	na	14.72

* Suzhou Fuel's net asset was stated at end-2007.

Source: Company data

Uncertainty in timing is the only risk to capacity growth. Adding to the uncertainty, however, is that management failed to give the timeframe of the asset injection. As such, we have not incorporated any capacity growth derived from asset injection into our model.

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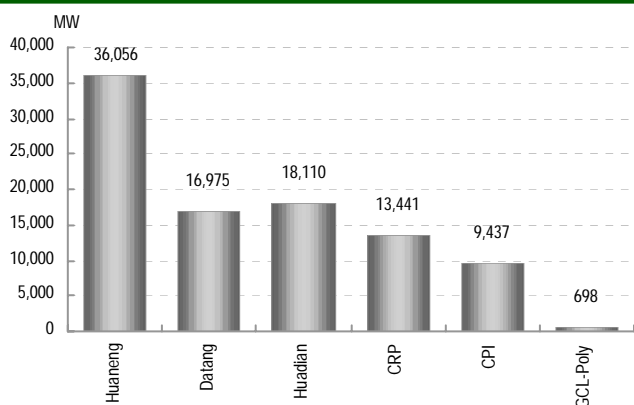
Asset injection – Most powerful way to boost capacity

Further financing may be needed if it acquires projects from parent. GCL-Poly raised net proceeds of approximately HK\$1,042m through IPO in Nov 2007 at the maximum offer price of HK\$4.1 per share. We estimate 80% of its IPO proceeds had been used for power plant and fuel company acquisitions. We expect GCL-Poly to raise capital if it processes the asset injections from the parent. In mid-May, the firm placed 50m new shares to raise ~HK\$75m. Although it is a privately owned IPP that is small in scale, we believe securing bank loan should not be difficult as mainland banks are keen to lend to the utility sector, in particular those energy-saving and environment-friendly companies.

Solar energy is another bright spot. On top of its wind and biomass power plants, we believe GCL-Poly will enter the ground-mounted solar power generation project in the future. With falling solar panel prices and the strengthening of government policy support, developing solar project has become more economically feasible. The key advantage for GCL-Poly to enter the solar business is that its sister company, GCL Silicon, is one of the largest polysilicon makers in China. GCL-Poly stated that there is a chance for the company to cooperate with GCL Silicon in a solar power generation project.

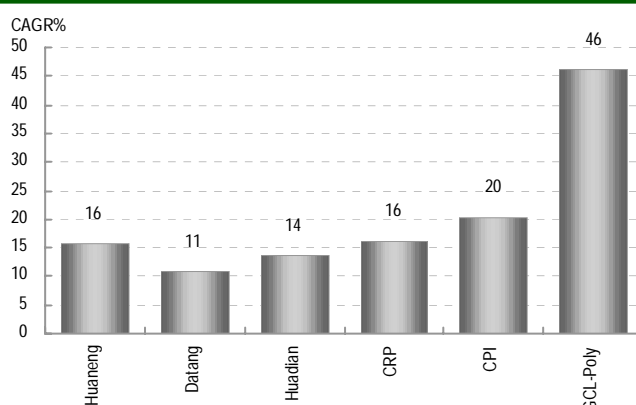
Small in size but with high growth potential. Compared with the five large coal-fired IPPs – Huaneng Power (902 HK), Datang Power (991 HK), Huadian (1071 HK), CRP (836 HK) and CPI (2380 HK), the size of GCL-Poly in terms of installed capacity is much tinier. However, if we assume the company will exercise its options to purchase the new power generation projects from the parent, which will add an ~880MW installed capacity, it should have the highest capacity CAGR of 46% in 2008-10F.

Figure 3 : Comparison of attributable capacity for FY08



Source: Company data

Figure 4 : Comparison of capacity CAGR in 2008-10F



Source: Company data

Scenario analysis – Acquisition of parent’s greenfield projects leads to fair value HK\$4.4. We believe the firm will acquire new projects from its parent because these projects are in line with GCL-Poly’s business strategy of developing renewable energy. Timing is the key uncertainty. If we assume the new projects from the parent (installed capacity of 880MW) to be injected into the company in 2010, GCL-Poly’s fair value, based on our target FY11F PE of 11x, should be HK\$4.4. This is higher than our base-case scenario of HK\$3.3, which does not factor in any asset injection over the next three years. For Zhu’s operating projects, the possibility of buying Zhu’s operating projects may be remote because of the problems associated to each project (see Table 7).

Table 7: The three operating projects are less likely to be injected into GCL-Poly in the next three years

Plant name	Reasons for the exclusion from GCLP
Nanjing Cogeneration	The land use right certificate and the building ownership certificate are still being processed.
Longgu	One of the shareholders of the plant, Jiangsu Natural Power Group, is undergoing corporate restructuring, and therefore approval cannot be obtained.
Taicang Harbour	The power plant is still undergoing heat-supply reform.

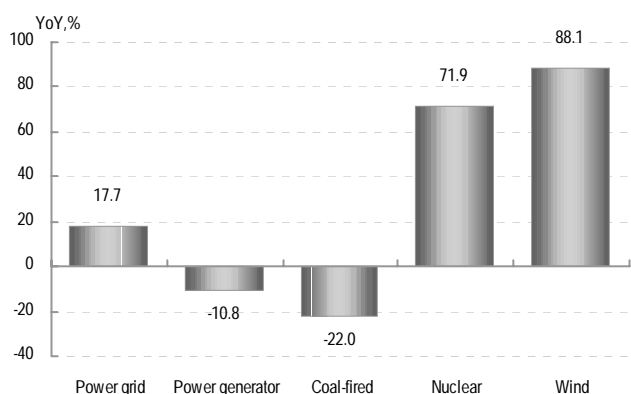
Source: Company data

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Overcapacity is checked by energy conservation policy

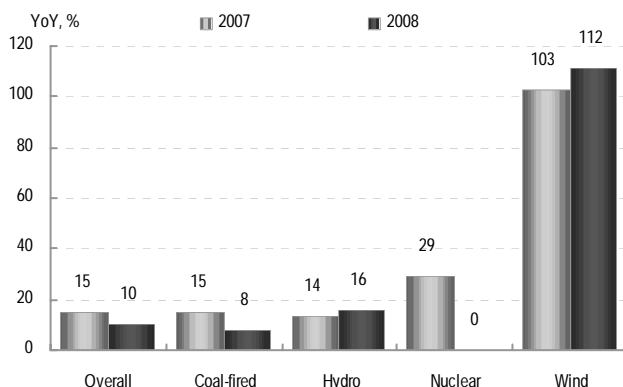
Government policies mitigate the risk of overcapacity in electricity. China suffered from overcapacity in power generation in 2008 with an 8% y-o-y decline in utilization hours to 4,677 hours as the 10.3% y-o-y growth rate in increment installed capacity (at 90,510MW) outpaced the 5.2% y-o-y increase in power consumption. Looking ahead, we believe the problem should be alleviated. According to the 11th Five-Year Plan, China aims to achieve a nationwide capacity target of about 923GW by 2010, representing an 8% 2008-10 CAGR, the slowest since 2003 (Figure 7). Breaking down capacity growth by fuel type, growth in 2008 was mostly driven by alternative energy (Figure 6), whose growth rate will continue to outpace coal-fired plants by 2010 (illustrated in Table 1). This implies that the power-supply structure is shifting to more environmental fuel type and the overcapacity threat stemmed from coal-fired plants should be lessened, in our view.

Figure 5 : Change in 2008 investment in power infrastructure construction by fuel type



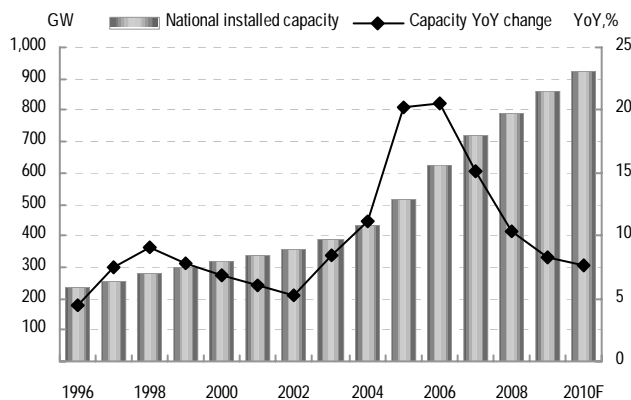
Source: CEC

Figure 6 : Change in 2008 installed capacity by fuel type



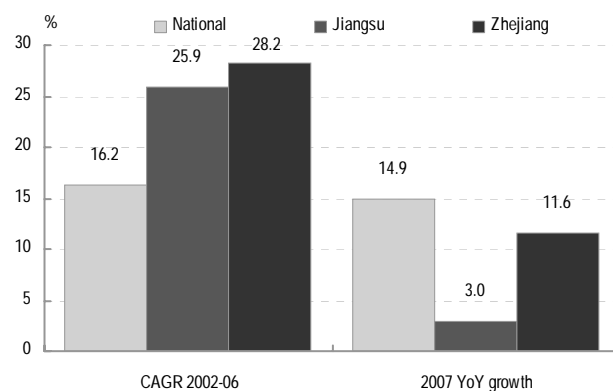
Source: CEC

Figure 7 : Slowdown in capacity growth in 2009-10, dragged by slowing growth in coal-fired capacity



Source: CEIC and NDRC

Figure 8 : Slowdown in capacity growth in Jiangsu and Zhejiang was sharper than nationwide in 2007



Source: CEC

Problem of overcapacity in Jiangsu and Zhejiang continues to ease. For the 17 CHP plants (excluding the Taicang WTE) operated by GCL-Poly in Jiangsu (14 plants) and Zhejiang (three plants), overcapacity in those provinces would lead to lower planned output (the maximum amount of electricity to be dispatched by any power plant to the relevant grid company), which is determined annually by the economic and trade commissions of the relevant provinces. GCL-Poly had previously suffered from lower planned output, resulting in lower power sales in those provinces in 2006. After the peak of capacity growth in those two provinces in 2006, we believe growth will decelerate by 2010, following a significant slowdown in 2007 (Figure 8) as the economic downturn in coastal regions would curb the commissioning of new power generators. The slowdown of capacity growth in Jiangsu and Zhejiang will be positive to GCL-Poly's power sales in these two provinces.

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Overcapacity is checked by energy conservation policy

Shutting down inefficient and polluting small power plants. To improve power efficiency, China aims to shut down coal-fired power plants of <50MW unit size and <100MW unit size that have operated for more than 20 years. Plants that fail to meet environmental standards, have high coal-consumption rates or exceed their designed operating life are also subject to shutdown. In 2008, 16.7GW of small units were closed and the number of shutdown exceeded the government plan by 3.7GW. On a cumulative basis, a total of 34.2GW of small units had been shut down in 2006-08, accomplishing 68% of the target set in the 11th Five-Year Plan.

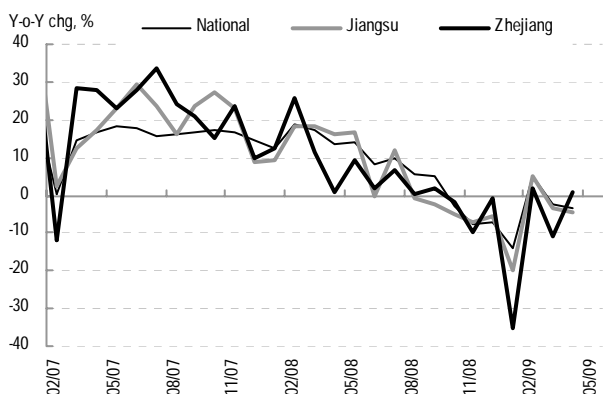
Shutdown policy improves GCL-Poly's competitive position. For cogeneration and Resource Comprehensive Utilization (RCU) units, those that fail to meet the environmental requirements are also forced to close down or suspend operation. All GCL-Poly's cogeneration plants have met the environmental requirements since its CHP plants are either installed with CFB boilers or desulphurization equipment to reduce the emission of air pollutants. Thus, we believe the small unit shutdown policy should help GCL-Poly to get rid of its small-scale peers and improve the demand-supply balance.

Preferential policy protects exclusive steam supply. On 17 January 2007, NDRC issued the Interim Regulations on the Construction and Management of Cogeneration and Gangues Comprehensive Utilization Power Generation Projects, which set out the heat zone within an 8-kilometer radius for the exclusive sale of steam by cogeneration plants. Within the heat zone of a constructed or planned-for-construction cogeneration plant, the local governments do not approve of any new construction of other cogeneration plants or boilers. Expansion projects proposed by existing small boilers within the heat zone are also banned. When the sole cogeneration plant within the heat zone commences production, the local government orders the demolition of all smaller boilers in the heat zone within three months, except those boilers with large capacities and equipment in good conditions, which could be permitted to remain as back-up plants during peak hours. This exclusive steam-sale arrangement does not require the power plant to meet the requirements on thermal efficiency and heat-to-power ratio. All GCL-Poly's CHP plants are enjoying the rights of exclusive steam sale. Management added the company's heat supply radius had been lifted from 8km to 15km, supported by growing steam demand and the advancement in steam-transmission technique. Management said that such exclusive steam sales rights also apply to the company's extended heat-supply radius.

Waning power demand less harmful to green energy IPPs

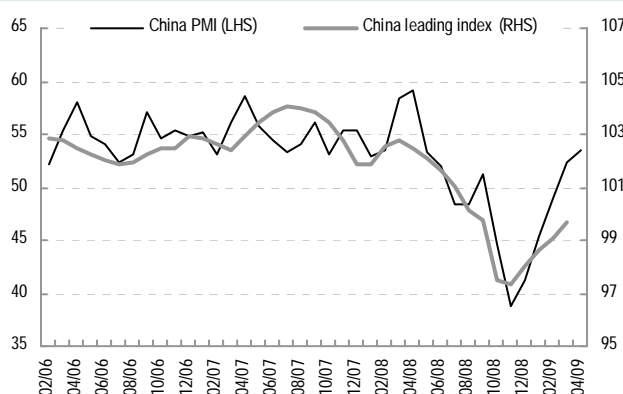
China's power demand has weakened, but is showing signs of stabilizing. Dented by the global economic recession, China experienced a sharp 14.1% y-o-y drop in electricity generation for Jan 2009, but the rate of decline has been narrowed to 3.6% y-o-y in April. Moreover, some leading indicators, including PMI, have already shown signs of stabilization. On the back of the government stimulus effort and the improving US economy, we expect power demand to stabilize in 2009.

Figure 9 : Decline in power generation started to stabilize



Source: CEIC

Figure 10 : Some leading indicators pointed to improved domestic economic condition



Source: Bloomberg

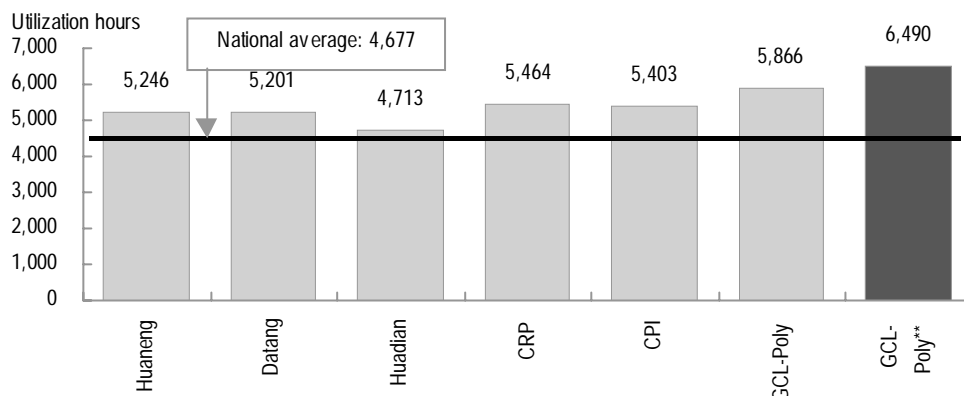
Energy-saving policy helps GCL-Poly to counter waning power demand. As long as GCL-Poly's cogeneration plants can meet the requirements stipulated in the No.1268 Regulation issued on 25 August 2000 (see the next page for details), its plants are entitled to higher dispatch priority than conventional coal-fired power plants under the Provisional Measures on Dispatch of Energy Saving Power Generation (Table 8). In addition, GCL-Poly's two biomass cogeneration plants (Baoying and Lianyungang Xiexin) and one WTE plant (Taicang Incineration) can dispatch all electricity production to the power grids under the Renewable Resources Law, which became effective on 1 Jan 2006. As such, GCL-Poly can enjoy higher utilization hours than coal-fired IPPs and national average (Figure 11).

Table 8: Dispatch priority of power-generation units is determined in the following sequence

- (1) Non-adjustable power-generation units utilizing renewable fuels
- (2) Adjustable power-generation units utilizing renewable fuels
- (3) Nuclear power-generation units
- (4) Cogeneration units and resources-comprehensive utilization power-generation units
- (5) Gas-fired power-generation units
- (6) Coal-fired power-generation units, including cogeneration units without heat load
- (7) Oil-fired power-generation units

Source: NDRC, SERC, State Environmental Protection, Bureau and Office of the National Energy Leading Group

Figure 11 : GCL-Poly enjoyed higher utilization rate in FY08 due to energy saving policy



* excluding the Suzhou gas-fired plant
Source: Company data and CEC

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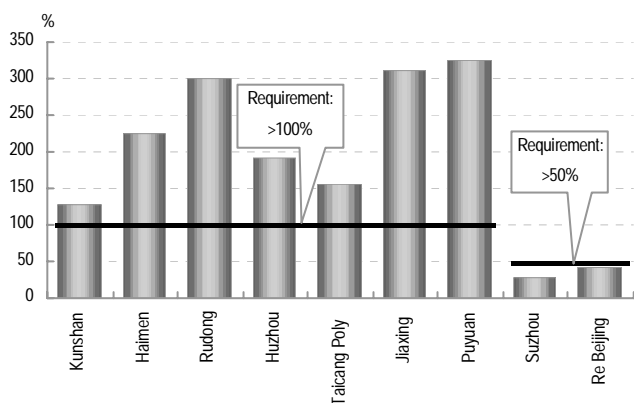
Waning power demand less harmful to green IPPs

Risks to GCL-Poly's power-dispatch priority. According to the No.1268 Regulation issued on 25 August 2000, the power-dispatch priority of a cogeneration plant is determined by the following ways:

- ◆ Power-efficiency requirements - If a cogeneration plant fails to meet the required heat-to-power ratio and thermal efficiency after the three-year grace period, it will lose the preferential treatment of higher power-dispatch priority. Specifically, for a cogeneration plant of <50MW with three-year operating history, it must achieve a heat-to-power ratio of >100% and thermal efficiency of >45%. For cogeneration plant of >50MW with three-year operating history, it must have a heat-to-power ratio of >50% and thermal efficiency of >45%. Up to 2008, GCL-Poly's nine coal-cogeneration plants met the required heat-to-power ratio and thermal-efficiency requirement, while its seven RCU (resources-comprehensive utilization) cogeneration plants are not subject to those efficiency requirements.
- ◆ Amount of steam being generated - Cogeneration plants' power-dispatch level is determined by the amount of steam generated. In other words, a cogeneration plant can dispatch as much power it generates as the amount of steam it generates for commercial sales. We expect GCL-Poly's CHP plants to continue to enjoy higher power-dispatch priority as we believe steam demand would hold up well in 2009.

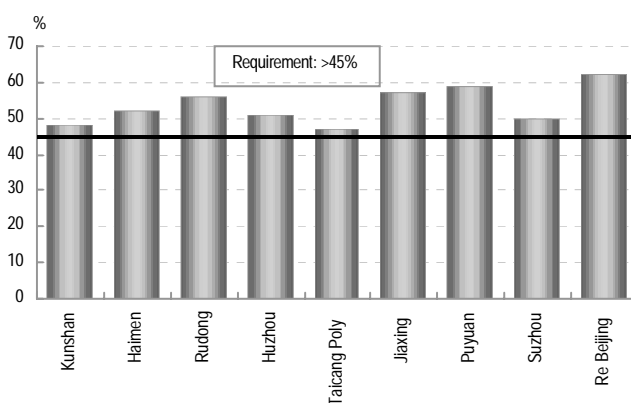
Since the Suzhou plant failed to meet the heat-to-power ratio requirement, it could not enjoy higher dispatch priority and dragged the company's overall utilization hours lower (refer to Figure 11).

Figure 12 : Heat-to-power ratio of GCL-Poly's CHP plants



Source: Company data

Figure 13 : Thermal efficiency of GCL-Poly's CHP plants



Source: Company data

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Firm steam demand despite economic slowdown

Steam demand should remain firm. Sales of GCL-Poly's steam rose steadily over the past years, with utilization rate climbing substantially from 10% in 2004 to 34% in 2008, primarily driven by increasing demand from its industrial customers. The deteriorating external environment poses a considerable risk to industrial production and in turn the demand for steam. However, we have seen signs of recovery from the US and China economies. We expect industrial activity to stabilize for the rest of 2009 and lend support to steam demand from industrial users.

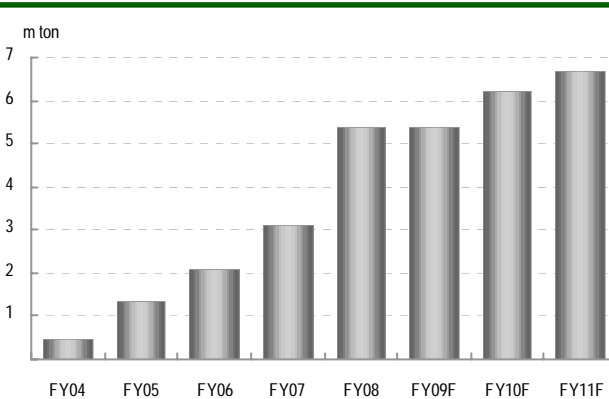
Apart from the stabilizing macro environment, management expects sustainable steam demand because for industrial users, 1) steam cost is cheaper than conventional fossil fuel (see Table 9) and 2) it is more economical and efficient to purchase steam from independent steam producer rather than build their own boilers. Thus, management is confident that gains in new industrial customers could swiftly replace the loss of existing customers as steam demand still outweighs supply.

Figure 14 : Growth in China industrial production softened



Source: National Bureau of Statistics of China

Figure 15 : GCL-Poly's steam sales volume grew rapidly and will gain steadily from 2010



Source: Company data and Core Pacific - Yamaichi estimates

Table 9: Steam price is the second-cheapest fuel on a heat-content basis

Fuel type	Reference price		Price per heat content
	(Rmb)	Per unit	Rmb per kBtu
Coal 7,000 kcal	650	ton	0.023
Steam	155	ton	0.065
NG	2.5	M ³	0.069
LPG	3,500	ton	0.075
Gasoline No. 90	7,300	ton	0.120
Electricity	523	MWh	0.153

Source: Core Pacific-Yamaichi

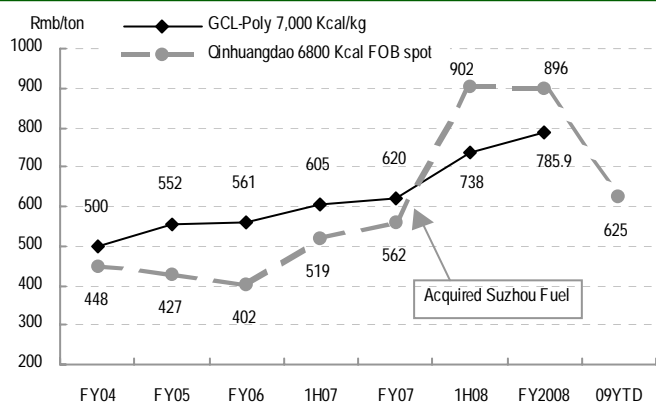
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A coal-to-power vertically integrated IPP

Acquired a coal-trading company to lower coal cost. In Dec 2007, GCL-Poly acquired a 100% stake in Suzhou Fuel Company, which is engaged in the procurement of coal, from its controlling shareholder for HK\$14m. Benefits from this acquisition include: 1) centralized procurement of coal through Suzhou Fuel Company enables GCL-Poly to have more favorable terms when negotiating with coal suppliers through bulk purchases, and 2) Suzhou Fuel Company can improve GCL-Poly's overall operating efficiency by overseeing and controlling coal costs at the group level.

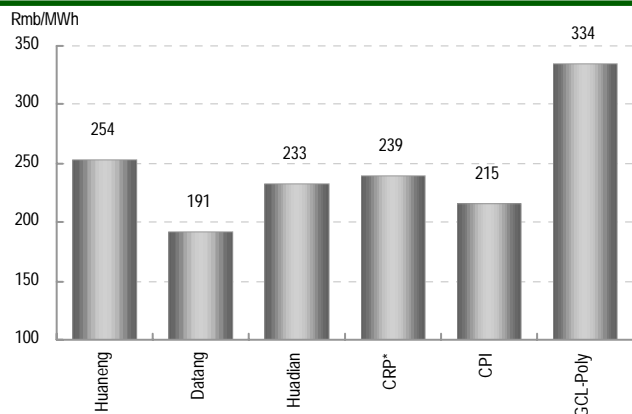
Good relationship with coal miner and higher proportion of contract coal to control coal cost. GCL-Poly purchases coal primarily from Shenhua Energy (1088 HK), Huainan Mining Group and other coal mining companies located in Shandong, Shanxi and Sichuan provinces. In fact, Shenhua is GCL-Poly's largest coal supplier. Management said 70-80% of coal is procured at contract price decided each December, while 20-30% is procured at spot market price. Through securing long-term supply contracts, GCL-Poly could lower its coal cost during the period of coal-price surge, in particular for 1H08. Despite its small scale, management said it could obtain coal supply from major coal miners at a price that is comparable to the five HK-listed IPPs, thanks to its long-term business relationship with the coal miners. Nevertheless, GCL-Poly's unit fuel cost is higher than the big IPPs because of its tiny size.

Figure 16 : GCL-Poly successfully controlled coal-cost surge



Source: Company data and Bloomberg

Figure 17 : GCL-Poly suffered from higher unit fuel cost due to its small size



Source: Company data

Acquired Duolun coal mine from parent to hedge coal-price change and increase revenue sources. In Aug 2008, GCL-Poly purchased a 55% stake in Duolun Coal Mine, which is 80% owned by Zhu, for HK\$96.75m, presenting Zhu's investment cost. Located in Inner Mongolia, the Duolun Coal Mine has coal reserves of 82.44m tons and marketable reserves of 15.76m tons, with an annual production capacity of 1.2m tons. The mine is expected to commence operation in 2H09. We believe this attractive acquisition at book value demonstrates the parent's keen support on GCL-Poly. With one-third of coal requirement being supplied by Duolun, we believe GCL-Poly, which has become a vertically integrated IPP, will have distinctive advantages of lower risk in the face of tight coal supply, hedging against the coal-price hike in China, and obtaining new revenue sources via external coal sales.

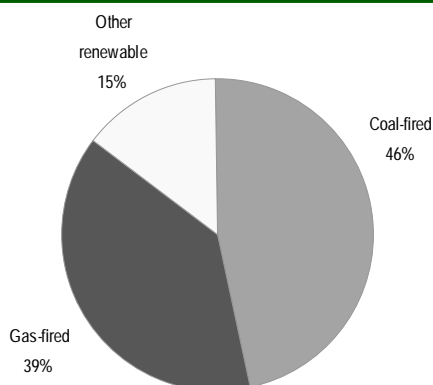
Potential of additional coal-mine acquisition from parent. Zhengzhou Coal and China Coal Chemical Group (CCCG), formed by Zhu and Morgan Stanley, have jointly invested in coal-mine assets in Henan. These coal-mine assets, which have majority stakes in three coal mines, are 51% owned by Zhengzhou Coal and 49% by CCCG. Zhengzhou's coal reserves exceed 600m tons, almost six times bigger than Duolun. However, management fails to provide guidance about the timing of such asset injection.

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Green IPPs enjoy lower cost and higher tariffs

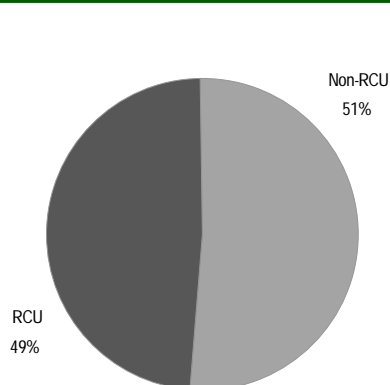
Diversified fuel mix – Another cost advantage over coal-fired IPPs. As an environmentally friendly energy company, GCL-Poly uses diversified fuel types rather than relying on coal alone as its two gas-fired cogeneration plants, one waste-incineration plant and two biomass-fuelled cogeneration plants were not affected by the increase in coal prices. Moreover, its seven RCU plants utilize comprehensive resources (CR) such as coal sludge and gangue that are cheaper than coal but with low heating value. Management plans to increase the proportion of utilizing CR to further save fuel costs. Its diversified fuel mix reduces the impact of rising coal prices on the firm's overall costs compared with other conventional power plants. As a result, GCL-Poly was still able to record profits in FY08.

Figure 18 : Installed capacity mix by fuel type (FY09F)



Source: Core Pacific - Yamaichi estimates

Figure 19 : Almost half of coal-fired CHPs are RCU (FY09F)



Source: Core Pacific - Yamaichi estimates

Clean energy – Yields higher tariff than conventional power plants. In June 2006, NDRC announced an on-grid tariff premium of Rmb15/MWh for all plants that had installed and operated FGD (flue gas desulphurization) equipment. All GCL-Poly's power plants fulfill this environmental requirement. NDRC also introduced a new pricing policy for renewable-energy power in January 2006, which provides a subsidy of Rmb0.25/kWh on top of the price given to conventional coal-fired power stations.

Stable tariff outlook for power sector. We believe the current economic downturn is unfavorable for the IPPs to lobby for tariff hikes. On the other hand, in spite of the coal price slump, we do not anticipate downward tariff adjustments in the near future for the whole nation (except Inner Mongolia and Yunnan where they have temporarily reduced tariffs to alleviate cost pressure of enterprises since Nov-Dec 2008) as we believe the government 1) does not want to add further deflation pressure on the whole economy by reducing tariff, 2) encourages the efficient use of energy through more rational pricing and 3) allows IPPs to recover some of their losses incurred during 2008, when the change in unit-fuel cost was much greater than that of the tariff.

Auto coal-steam price pass-through to protect the margin of CHP operator. To ensure that CHP operators can maintain reasonable margins, most local pricing bureaus allow CHP operators to pass through the increase in coal cost to steam users through raising steam tariffs, which are negotiated with users under the guidelines from local pricing bureaus. GCL-Poly benefited from such pricing mechanism in FY08, with average steam price rising 27% y-o-y to Rmb174/ton amid the coal-price rally. However, steam prices are very likely to fall along with the drop in coal prices. As such, we forecast revenue from steam sales to dip in 2009.

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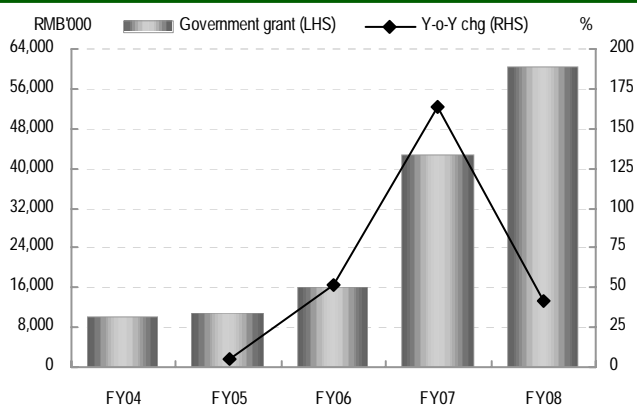
Green IPPs enjoy tax and other benefits

Additional revenue source from the sale of carbon credit. GCL-Poly has successfully completed its maiden sale of carbon credits from its Taicang WTE plant. Pursuant to a Verified Emission Reduction Purchase Agreement (VERPA) dated 10 April 2007, the company, through its Taicang Plant, is contracted to sell the carbon credits generated by Taicang Plant to a European buyer. The carbon credits are verified under the Voluntary Carbon Standards and are known as Voluntary Carbon Units (VCUs). Taicang Plant has received the payment from the buyer for the delivery of VCUs from the first monitoring period. GCL-Poly expects to continue delivering VCUs from Taicang Plant up to 2012. The firm has also contracted to sell carbon credits from its other renewable-energy projects, including biomass power plants and wind farm. China is also one of the 169 countries that have agreed to conform to mandatory emissions controls under the Kyoto Protocol. This enables environmentally friendly projects in China to earn credits for reducing pollution. These credits can be traded with the other parties under the Protocol that have exceeded predefined emissions levels.

VAT tax refund. RCU plants certified by the relevant authorities are entitled to receive refund of half the regular value-added tax (VAT). Currently, GCL-Poly has seven RCU plants (including the Funing plant), which can benefit from this tax benefit. In addition, all its CHP and renewable-energy plants that purchase domestically manufactured power generation equipment are entitled to receive a VAT rebate. Moreover, GCL-Poly also received a VAT refund for purchasing environmental friendly raw materials. The refund would be granted if total environmental friendly raw materials consumed represented more than 60% of total raw materials of PRC subsidiaries.

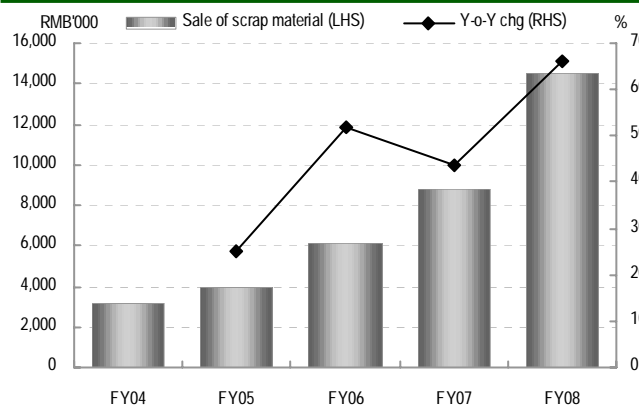
More revenue sources from environment-friendly waste recycling and government subsidies. GCL-Poly sells scrap materials, mainly by-products of the operation of its power plants, such as hot water, coal stone and coal ash. Income from sales of scrap materials has soared markedly over the past years. Moreover, government will grant incentive subsidies to IPPs that develop environmental friendly electricity generation. For instance, GCL-Poly received Rmb5.6m in incentive subsidy after its two biomass-fired plants helped reduced pollution and saved energy in 2008. The government also grants municipal solid waste handling fee at Rmb93/ton to GCL-Poly's Taicang WTE plant, which handles about 600tons of municipal solid waste daily.

Figure 20: GCL-Poly received government grants



Source: Company data

Figure 21: Income from sales of scrap materials



Source: Company data

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Financial analysis: Robust earnings growth ahead

Decline in turnover in 2009. We expect GCL-Poly's turnover to dwindle 17% y-o-y in 2009 due to flat electricity sales, a mild decline in steam sales and a substantial drop in coal trading. For electricity sales, the decline in power demand will offset part of the gain from tariff hikes made in 2H08. We assume the average utilization hours for coal-fired CHP plants will decrease from 6,300hrs in FY08 to 5,400hrs in FY09, while the effective power tariff will increase from Rmb432/MWh in FY08 to Rmb460/MWh in FY09. Fortunately, we expect the decline in GCL-Poly's electricity sales to be milder than other conventional fuel IPPs as its WTE, biomass and CHP plants have higher priority in power dispatch. In addition, we expect steam sales to decline 11% y-o-y in FY09, hit by the 11% y-o-y drop in steam selling price. Coal trading will plunge 78% y-o-y partly due to the delay in commercial production of the Duolun Coal Mine.

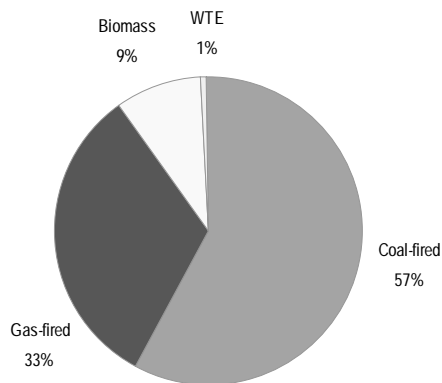
Table 10: Financial forecast on Duolun Coal Mine

	Unit	FY09F	FY10F	FY11F
Actual production	'000 tons	360	1,200	1,200
Mine-mouth price per ton	Rmb/ton	200	205	208
After-tax price	Rmb/ton	177	182	184
Unit cost	Rmb/ton	(176)	(155)	(145)

Source: Core Pacific-Yamaichi estimates

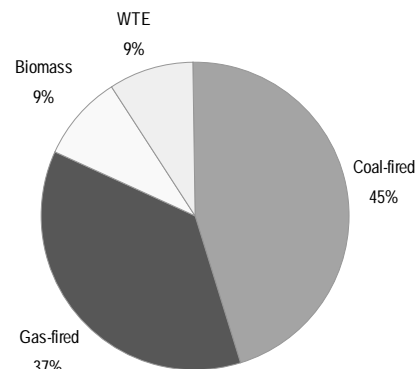
Margin recovery in 2009. Benefiting from the dip in coal price, GCL-Poly's gross profit margin will improve by ~5ppts y-o-y to 18.4% in FY09, while EBIT margin will rise 2.1ppts y-o-y to 13.5%. We assume FY09F coal cost will fall 6% y-o-y, which is much milder than the recent 22% slump in Qinhuangdao 6,800kcal coal price from FY08 average. Relatively, GCL-Poly will benefit less from the decline in coal price than other traditional coal-fired IPPs since the operating profit from coal-fired CHP plants only accounted for <50% of GCL-Poly's total EBIT (see Figure 23).

Figure 22: Power & steam revenue mix by fuel type (FY08)



Source: Company data

Figure 23: EBIT mix by fuel type, excluding coal trading



Source: Company data

Relief in finance costs on lower interest rate and dwindling bank borrowing. We estimate the 60% y-o-y jump in FY08 finance costs will not repeat in 2009-11 as PBOC cut lending rates by five times in 2H08 and interest rates are likely to remain intact in the following years until an immense pickup in inflation pressure. Since we have not incorporated any substantial capacity expansion in 2009-11, demand for new bank loans to fund CAPEX will gradually decrease, and thus net gearing ratio will improve as well. In short, finance costs will drop 22% y-o-y in FY09.

Results from associates will rebound in 2009. GCL-Poly owns two associate power firms – the 60%-owned Funing CHP plant and the 49%-owned China Resources Beijing CHP plant. We expect Funing CHP plant, a RCU CHP plant, to rebound strongly in FY09 on the back of lower coal price. This plant only made Rmb2.1m in earnings contribution to GCL-Poly in FY08, plunging 88% y-o-y. We expect profit contribution from China Resources Beijing, a gas-fired CHP, will decline modestly in the face of waning power demand.

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Financial analysis and risks to our estimations

Income-tax rate will rise gradually to reach 25% in 2012. GCL-Poly adopted a higher statutory tax rate of 18% and made a provision for dividend withholding tax of RMB10.5m (5% of FY08 pre-tax profit) for FY08. We assume GCL-Poly's effective tax rate will gradually increase by 2ppts per year from 13% in FY08 to reach 25% in 2012 under the new enterprise income-tax rule.

Net profit will grow strongly at a 22% CAGR in 2009-11F. After making all the above assumptions, we expect GCL-Poly's FY09 net profit to jump 36% y-o-y to RMB178m. Based on our sensitivity analysis in Table 11, GCL-Poly is more sensitive to the changes in coal fuel cost, followed by average tariff and utilization hours. Our sensitivity analysis is based on GCL-Poly's coal-fired CHPs and has excluded the effects from other plants (i.e. gas-fired CHP and other renewable-energy plants) because we believe the operating results of non-coal-fired plants are much more stable than coal-fired CHP, and a sensitivity analysis on non-coal-fired plants is less meaningful. After 2009, we assume that all major parameters, including coal fuel cost, utilization rates and installed capacity, will register only modest increases, while we keep our average tariff assumption largely unchanged. Thus, we estimate FY10/11 net profit growth to slow to 30% and 14%. In short, GCL-Poly's net profit will grow at a 22% CAGR in 2009-11F.

Table 11: Sensitivity analysis on GCL-Poly's FY09F net profit

	Coal price change				Tariff change				Utilization hours change			
	Coal price (RMB/ton)	chg fr. base case	Net profit (RMBm)	chg fr. base case	Ave tariff (RMB/MWh)	chg fr. base case	Net profit (RMBm)	chg fr. base case	Utilization (Hours)	chg fr. base case	Net profit (RMBm)	chg fr. base case
Base case	816	10%	78	-56%	414	-10%	105	-41%	4,860	-10%	161	-9%
	779	5%	128	-28%	437	-5%	142	-21%	5,130	-5%	170	-5%
	742	0%	178	0%	460	0%	178	0%	5,400	0%	178	0%
	705	-5%	228	28%	483	5%	215	21%	5,670	5%	187	5%
	668	-10%	278	56%	506	10%	251	41%	5,940	10%	195	9%

Source: Core Pacific-Yamaichi estimates

Swing factors to our earnings forecast. We believe the following factors will derail our earnings estimations for GCL-Poly:

- 1) **Coal fuel cost:** If coal prices move higher / lower than our assumptions, GCL-Poly's earnings will be lower / higher than our estimations;
- 2) **Average tariff for electricity and steam:** We are assuming that electricity will stay flat while steam price will fall in 2009 and steadily recover from 2010. Any unexpected changes in electricity tariff and steam prices will deviate our forecasts;
- 3) **Utilization rate:** Based on our assumptions, utilization rate for electricity and steam capacity will fall in 2009, but recover gradually from 2010. Any surprising improvement/deterioration in China's economic condition will post upside/downside risk to our estimations;
- 4) **Installed capacity:** Since we are uncertain about the timing of asset injection, we conservatively assume that GCL-Poly's installed capacity will grow at a slow pace by organic growth. If any asset injection occurs in the near future, the risk to our earnings estimation will definitely be on the upside;
- 5) **Government's green policy:** Our model assumes the existing government supportive policies towards the CHP and renewable-energy sector will continue in the future. In our view, upside risk to our estimations is very likely since the government has shown strong intentions to accelerate the development of renewable energy.

DCF derived 12-month TP at HK\$3.3

Fair value based on DCF – HK\$3.3. We value the company with a DCF approach since this is a power utility with stable cash flow. We assume that EBIT growth will start declining post-2011 as we have not factored in any substantial new capacity addition, thus CAPEX and depreciation will also start to fall since then. We have adopted a 1% terminal growth rate and 8.4% WACC and arrived at our HK\$3.3 target price.

Table 12: GCL-Poly's DCF model

GCL-Poly: DCF model (RMB'000)	2008	2009	2010	2011	2012	2013	2014	2015	Terminal
EBIT	420,915	416,358	480,093	522,728	554,092	581,797	605,068	623,220	
Depreciation & amortization	245,530	230,977	248,077	245,613	166,228	116,359	60,507	31,161	
Share from associates		52,257	50,330	49,569	51,552	52,583	53,109	53,640	
CAPEX	(488,675)	(289,500)	(380,000)	(135,000)	(133,650)	(126,968)	(114,271)	(99,416)	
Change to WC	(22,595)	(123,044)	3,580	20,413	(55,409)	(29,090)	(24,203)	(12,464)	
Share to MI	(48,424)	(47,493)	(57,611)	(62,727)	(55,409)	(58,180)	(60,507)	(62,322)	
Operating taxes	(16,920)	(26,554)	(41,325)	(55,627)	(77,573)	(104,723)	(133,115)	(155,805)	
Unleveraged FCF	89,831	213,002	303,143	584,968	449,830	431,778	386,588	378,014	381,794
chg		137.1%	42.3%	93.0%	-23.1%	-4.0%	-10.5%	-2.2%	1.0%
Discounted FCF		213,002	279,485	497,227	352,519	311,965	257,517	232,154	
Discounted terminal value								3,141,089	
Total DFCF		5,284,958							
Net debt		(2,314,481)							
Shareholder NPV		2,970,477							
Year-end # of shares ('000)		1,022,660							
FX rate (Rmb:HKD)		0.88							
NPV / share (HK\$)		3.3							

WACC parameters:	
Risk-free rate	2.00%
Market require return	10.50%
Equity risk premium	8.5%
BETA	1.07
Cost of equity	11.1%
Debt finance cost	6.0%
Tax rate	25%
Debt - After tax cost	4.5%
Net debt (HK\$'000)	2,314,481
Owners' equity (HK\$'000)	3,511,523
Target debt-to-capital ratio	40%
WACC	8.5%

Table 13: Sensitivity analysis of GCL-Poly's DCF assumptions

WACC	Target price	Terminal growth	Target price
10.5%	2.15	4.0%	5.82
9.5%	2.66	3.0%	4.67
8.5%	3.30	2.0%	3.88
7.5%	4.14	1.0%	3.30
6.5%	5.28	0.0%	2.86

Source: Core Pacific-Yamaichi estimates

Attractive in terms of relative valuations

Undervalued compared with traditional IPPs and other new energy counters. GCL-Poly is trading at 41% and 19% discounts in terms of FY09F PB and PE to the average of the five large IPPs. Such huge discounts exist because GCL-Poly is much tinier in size and is not a state-owned enterprise, in our view. However, we believe the growth potential for GCL-Poly should be much greater because of its smaller base, asset injection potential and the government's green energy policy. Therefore, the current huge discount to the large five IPPs is not justifiable.

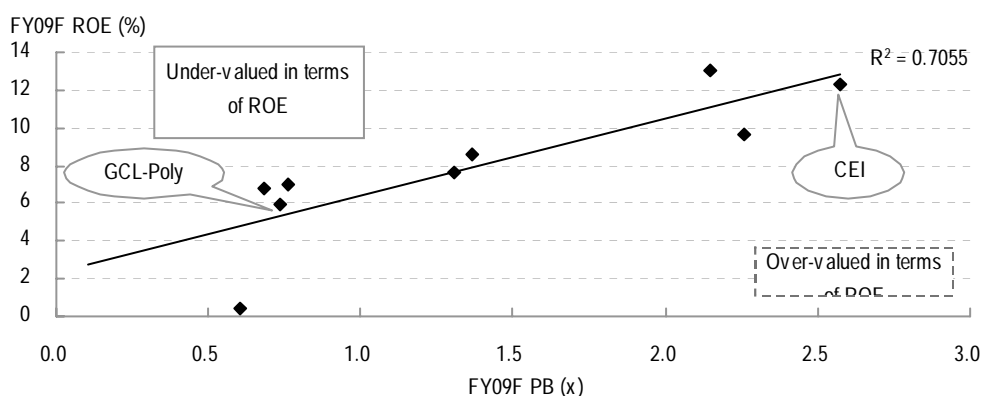
On the other hand, most new energy stocks are trading at hefty valuations, but their earnings outlook visibility is very low because they have a short or even no operating history. With its proven and sound track record, we believe the valuation gap between GCL-Poly and other renewable-energy IPPs should narrow. Currently, the five large coal-fired IPPs are trading at an average of FY09F 15.4x PE and 1.3x PB, while the other renewable-energy IPPs are trading at FY09F 49.8x PE and 1.5x PB. Our TP of HK\$3.3 translates into FY09F 16.4x PE and 1.0x PB, and we find that such valuations remain appealing.

Table 14: Peer valuation comparisons

Company	Code	Closing (HK\$)	Mkt Cap (HK\$m)	PE (x)			PEG		PB (x)			Yield (%)	
				08	09E	10E	09-11E	08	09E	10E	09E	10E	
New energy													
China WindPower	182 HK	1.04	6,505	35.9	32.5	16.8	0.3	3.2	2.3	1.6	na	na	
HKC Holdings	190 HK	0.80	6,604	na	133.3	160.0	1.0	0.6	0.6	0.6	0.0	0.0	
Hong Kong Energy	987 HK	0.82	626	na	na	na	na	na	na	na	na	na	
China Power New Energy	735 HK	0.69	4,844	105.7	na	na	na	na	na	na	na	na	
GCL-Poly Energy	3800 HK	2.50	2,431	15.9	12.4	9.7	0.6	0.8	0.7	0.7	1.2	1.5	
China Everbright	257 HK	2.57	8,082	23.8	20.9	17.5	1.6	2.5	2.6	2.3	0.7	0.9	
Sub-sector average				45.3	49.8	51.0	0.9	1.8	1.5	1.3	0.6	0.8	
Traditional IPPs													
Huaneng Power	902 HK	5.40	93,817	na	18.2	13.2	0.7	1.4	1.3	1.3	3.2	4.1	
Datang Power	991 HK	4.37	87,495	64.1	17.5	13.5	0.6	1.5	1.4	1.2	2.6	3.2	
China Resources Power	836 HK	17.52	74,248	42.4	18.5	14.3	0.9	2.4	2.1	1.9	1.6	2.1	
Huadian Power	1071 HK	2.16	28,459	na	11.8	8.1	0.7	0.8	0.8	0.7	2.6	3.6	
China Power International	2380 HK	2.34	8,437	na	10.8	8.1	0.4	0.7	0.7	0.7	2.9	4.0	
Sub-sector average				53.2	15.4	11.4	0.7	1.4	1.3	1.2	2.6	3.4	
Total Average				47.6	37.9	37.0	0.8	1.8	1.6	1.4	1.4	1.8	

Source: Bloomberg and Core Pacific-Yamaichi estimates

Figure 24: Peer valuation comparison



Source: Bloomberg and Core Pacific - Yamaichi

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Profit & loss (consolidated)

Year to 31 Dec (RMBm)	2007	2008	2009F	2010F	2011F
Revenue	1,845	3,693	3,076	3,613	3,913
Power sales	1,470	2,189	2,194	2,520	2,704
Steam sales	374	827	735	875	988
Coal trading	0	677	147	218	221
Cost of good sold	(1,482)	(3,196)	(2,511)	(2,983)	(3,244)
Gross profit	362	497	565	630	669
Other income	109	168	107	123	137
Distribution costs	0	(7)	(1)	(2)	(1)
SG&A	(209)	(238)	(254)	(271)	(282)
EBIT	262	421	416	480	523
Finance cost	(162)	(259)	(203)	(186)	(175)
Gains/losses from associate	20	45	52	50	50
Non-recurring items	(337)	0	0	0	0
Profit before tax	(216)	207	266	344	397
Income tax credit (expense)	4	(27)	(40)	(55)	(69)
Minority interests	(55)	(48)	(47)	(58)	(63)
Net profit	(267)	131	178	232	266
EPS (Rmb)	(0.571)	0.135	0.177	0.227	0.260
DPS (HK\$)	0.000	0.023	0.030	0.039	0.044
BVPS (Rmb)	2.337	2.484	2.980	3.235	3.567

Cash flow (consolidated)

Year to 31 Dec (RMBm)	2007	2008	2009F	2010F	2011F
Operating cash flow	214	641	491	698	754
Pretax profit	(216)	207	266	344	397
Depre & amort	163	254	239	256	254
Change in wc	(191)	(23)	(123)	4	20
Others	458	202	110	94	83
Investing cash flow	(209)	(469)	(265)	(347)	(102)
Net CAPEX	(255)	(489)	(290)	(380)	(135)
Others	46	20	24	33	33
Free cash flow	5	172	206	322	617
Financing cash flow	624	(550)	(12)	(533)	(257)
Equity financing	1,049	2	0	0	0
Chg in bank loans	179	(230)	0	(192)	(181)
Dividend	0	0	(20)	(29)	(36)
Others	(604)	(321)	8	(312)	(41)
Net cash flow	628	(378)	215	(182)	395

Key assumptions

Year to 31 Dec	2007	2008	2009F	2010F	2011F
Installed capacity (MW)	840	870	941	989	1,004
chg Y-o-Y%	198	4	8	5	2
Steam Extraction (ton/hr)	1894	2,199	2,249	2,367	2,412
chg Y-o-Y%	69	16	2	5	2
Power sales (GWh)	3,726	4,591	4,269	4,845	5,202
chg Y-o-Y%	6	23	-7	13	7
Steam sales (ton,000)	3,040	5,364	5,367	6,228	6,669
chg Y-o-Y%	45	76	0	16	7
Ave utilization hours	6,173	5,866	5,172	5,520	5,751
chg Y-o-Y%	-14	-5	-12	7	4
Ave power tariff	427	477	514	520	520
chg Y-o-Y%	5	12	8	1	-0
Ave steam price	120	154	137	140	148
chg Y-o-Y%	24	28	-11	2	6
Ave coal cost	620	786	742	788	826
chg Y-o-Y%	11	27	-6	6	5

Balance sheet (consolidated)

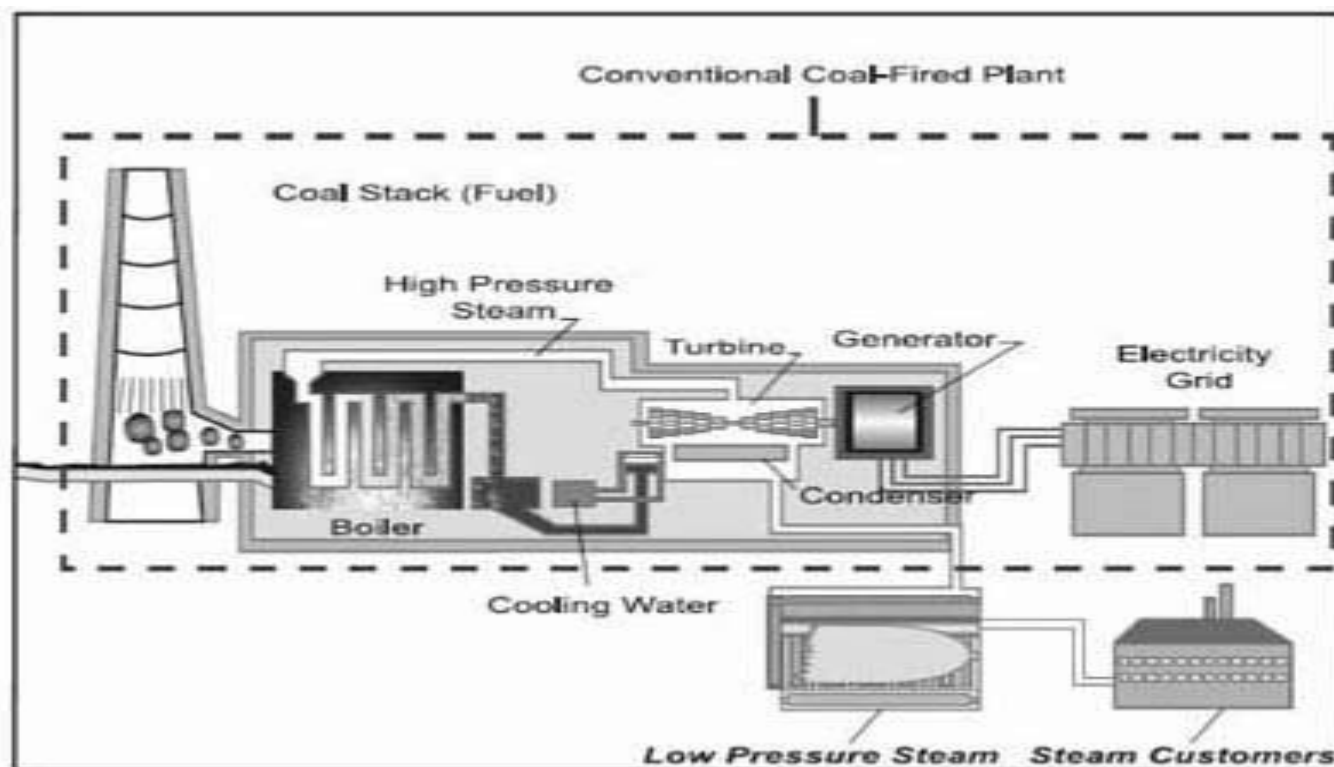
As at 31 Dec (RMBm)	2007	2008	2009F	2010F	2011F
Total assets	6,867	7,070	7,433	7,705	7,889
Current assets	1,748	1,407	1,654	1,771	2,044
Cash at banks	1,046	645	935	892	1,108
Accounts receivable	547	468	447	561	597
Inventory	126	259	239	280	299
Others	29	35	32	38	40
Non-current assets	5,119	5,662	5,779	5,934	5,846
Net fixed assets	4,658	4,948	5,007	5,139	5,028
Prepaid lease payment	234	228	235	231	226
Intangible assets	131	130	130	130	130
Interests in associates	73	245	273	295	316
Others	23	111	134	139	145
Total liabilities	4,230	4,246	4,026	3,981	3,833
Current liabilities	2,157	2,542	2,371	2,349	2,295
Bank borrowings	1,492	1,652	1,690	1,529	1,438
Accounts payable	615	827	637	769	818
Due to related companies	46	54	38	46	33
Others	5	8	5	6	6
Long-term liabilities	2,073	1,704	1,655	1,631	1,538
Bank borrowings	1,988	1,597	1,560	1,529	1,438
Convertible notes	0	0	0	0	0
Others	85	107	96	103	100
Total equity	2,637	2,824	3,407	3,724	4,057
Shareholders' equity	2,273	2,416	3,002	3,309	3,648
Minority interests	364	408	405	415	409
Net cash / (debt)	(2,434)	(2,604)	(2,314)	(2,166)	(1,769)
Net working capital	(410)	(1,135)	(2,371)	(2,349)	(2,295)
Total capital invested	4,261	4,013	4,562	4,837	5,086

Key ratios

Year to 31 Dec	2007	2008	2009F	2010F	2011F
Momentum (%)					
Revenue	103	100	-17	17	8
Gross profit	82	37	14	11	6
EBIT	57	60	-1	15	9
Net profit	na	na	36	30	14
EPS	na	na	31	28	14
Margin (%)					
Gross profit	19.6	13.5	18.4	17.4	17.1
EBIT	14.2	11.4	13.5	13.3	13.4
Net profit	-14.5	3.6	5.8	6.4	6.8
Return (%)					
ROIC	6.0	9.1	7.8	8.3	8.5
ROE	-11.7	5.4	5.9	7.0	7.3
ROA	-3.9	1.9	2.4	3.0	3.4
Financial risk (%)					
Net gearing	107	108	77	65	48
Interest coverage (x)	1.6	1.6	2.0	2.6	3.0
Liquidity (x)					
Current ratio	0.8	0.6	0.7	0.8	0.9
Quick ratio	0.8	0.5	0.6	0.6	0.8
Others (%)					
Effective tax rate	2	13	15	16	17
Payout ratio	0	15	15	15	15

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Appendix 1: Coal-fired versus cogeneration plant



Source: Company data

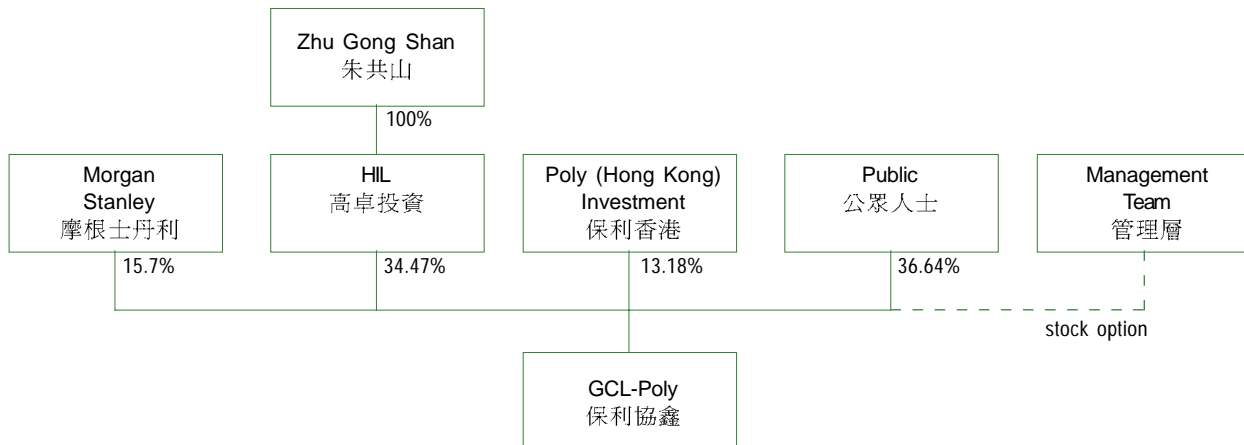
Traditional coal-fired power plant:

- ◆ Generates electricity only, and heat is wasted in the process of condensation.
- ◆ Thermal efficiency is about 30-40%.

GCL-Poly's cogeneration power plant:

- ◆ Generates both electricity and steam by using the same fuel through the same process, also known as combined heat and power (CHP).
- ◆ High-pressure steam, after generating electricity, is transformed into low-pressure steam, which is sold to nearby commercial and residential customers.
- ◆ CHP is a highly efficient method of power and heat generation, and thermal efficiency is 45-90% for cogeneration plants under 50MW.

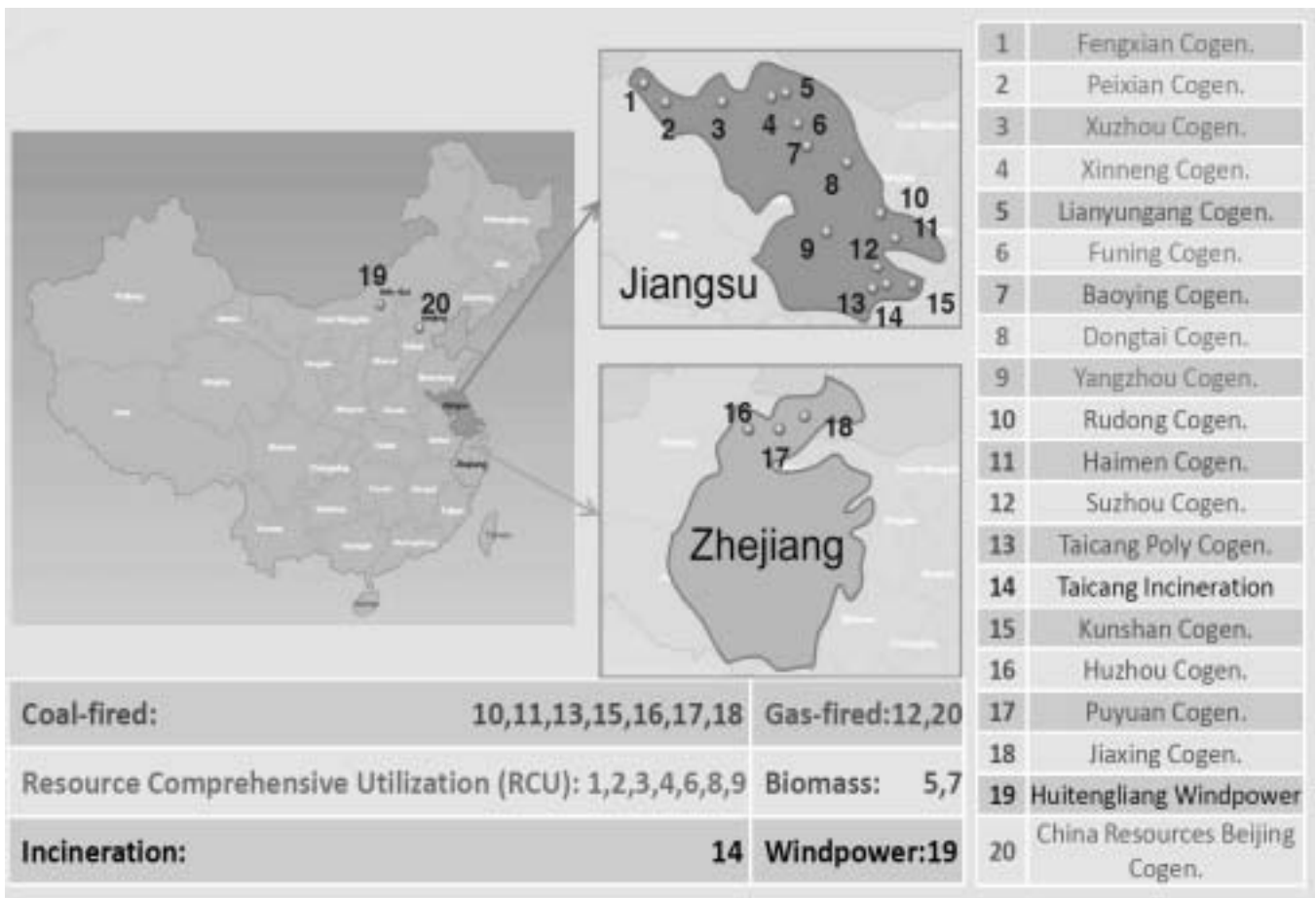
Appendix 2: Shareholding structure



Source: Company data

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Appendix 3: Geographical distribution of GCL-Poly's power plants



Source: Company data

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