



Share Data

| | |
|------------------------------|-----------|
| Price (10/04/2012) | HK\$1.63 |
| 12 mth target price | HK\$1.77 |
| 52 wk high/low (HK\$) | 1.57/1.85 |
| Stock code | 579 |
| Issued shares (mn) | 6,149.91 |
| Domestic shares | 4,512.36 |
| H-shares | 1,637.55 |
| H-share market cap (HK\$ mn) | 2,669.20 |
| H-share free-float | 22.12% |
| 15-day avg vol (mn) | 0.781 |
| Auditors | Deloitte |
| Major shareholder: | |
| BEIH | 67.96% |

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Report date: Apr 10, 2012

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Financial Summary

| FY ended Dec 31 | 2009 | 2010 | 2011 | 2012F | 2013F |
|--------------------------|---------|---------|---------|---------|---------|
| Revenue (Rmb mn) | 4,785.5 | 3,624.8 | 3,905.0 | 5,092.2 | 9,104.4 |
| Change (YoY) | 112.1% | -24.3% | 7.7% | 30.4% | 78.8% |
| Net profit (Rmb mn) | 179.6 | 488.9 | 803.5 | 1,029.7 | 1,390.7 |
| Change (YoY) | 299.5% | 172.2% | 64.3% | 28.2% | 35.1% |
| FD EPS (Rmb) | 0.0488 | 0.1023 | 0.1332 | 0.1674 | 0.2261 |
| Change (YoY) | 178.9% | 109.6% | 30.2% | 25.7% | 35.1% |
| PER (x) | - | - | 9.94 | 7.91 | 5.85 |
| NBV (Rmb/share) | 1.4351 | 1.4155 | 1.4558 | 1.4875 | 1.6802 |
| PB (x) | - | - | 0.91 | 0.89 | 0.79 |
| DPS (Rmb) (post-listing) | - | - | 0.00874 | 0.03349 | 0.04523 |
| Dividend yield | - | - | 0.44% | 1.67% | 2.25% |
| ROAA | 1.13% | 2.43% | 3.48% | 3.38% | 3.39% |
| ROAE | 3.99% | 8.12% | 10.34% | 11.49% | 14.28% |

@(HK\$0.8121/Rmb) Source: BJCE (historical figures only), F: ABCI Securities estimates

Beijing Jingneng Clean Energy (579) - HOLD
A niche green energy play in the Capital

Beijing Jingneng Clean Energy “BJCE” (the group) is the largest gas-fired power provider in Beijing and a leading wind operator in PRC. Backed by a strong shareholder structure and a strong portfolio of pipeline projects, the group is well-positioned to capture the clean energy growth promoted by government policy. We forecast the group’s revenue and net profit to grow at CAGR 52.7% and 31.6%, respectively, from FY11 to FY13.

Dominant position in Beijing- The group started its gas-fired business in Beijing in 2006 and has now become the largest gas-fired power and heat power provider in Beijing in terms of consolidated installed gas-fired power capacity. As at 31 Dec 2011, consolidated installed capacity of BJCE’s gas-fired power plant amounted to 1,190MW, accounting for 61% of the total installed gas-fired power capacity in Beijing. In terms of heat power, the group’s consolidated installed capacity amounted to 1,045MW as at 31 Dec 2011, with a heat energy supply coverage area of 17mn m², accounting for 73.9% of Beijing’s gas-fired cogeneration centralized heat energy generation.

Strong shareholder background - The controlling shareholder of the group Beijing Energy Investment Holding Co. Ltd (BEIH), is a state-owned investment enterprise wholly owned by the Municipal Government of Beijing. We believe BEIH can provide BJCE with strong resource assurance for both project sourcing and implementation of projects. In addition, the reorganization of BEIH and Beijing District Heating (Group) Co, Ltd (BDHG) in Dec 2011 will further reduce business risks of being unable to dispatch the additional heat output from the new installed capacity.

High growth supported by huge pipeline projects – As Beijing took the lead to monitor PM2.5 (particulate matter with a diameter of 2.5 millimeters in the atmosphere) in 2011, the approval process for the gas-fired cogeneration unit construction and operation has been speeded up. The strong portfolio of both gas and wind pipeline projects allow the group to post significant growth in consolidated capacity. We expect the group’s total consolidated installed capacity will increase by 73.6%YoY to 4,337MW by the end of 2012 and 100.4%YoY to 8,694MW by the end of 2013.

Valuation

In view of market valuation of comparable peers and the expected earnings growth of the group, we value the share at HK\$1.77, which represents 8.60x of our est. FY12 EPS.



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Beijing Jingneng Clean Energy Co., Limited

Content

| | Page |
|------------------------------------------|------|
| Front Cover | 1 |
| Investment Themes | 3 |
| Industry Outlook | 9 |
| Business Analysis and Financial Forecast | 15 |
| Sensitivity Analysis | 21 |
| Sector Comparison | 22 |
| Valuation | 23 |
| Risk Factors | 26 |
| Disclosures | 28 |



Investment Themes

Dominant position in Beijing

The group started its gas-fired business in Beijing in 2006 and has now become the largest gas-fired power and heat power provider in Beijing in terms of consolidated installed gas-fired power capacity. As at 31 Dec 2011, consolidated installed capacity of BJCE's gas-fired power plant amounted to 1,190MW, accounting for 61% of the total installed gas-fired power capacity in Beijing. In terms of heat power, the group's consolidated installed capacity amounted to 1,045MW as at 31 Dec 2011, with a heat energy supply coverage area of 17mn m², accounting for 73.9% of Beijing's gas-fired cogeneration centralized heat energy generation.

Strategically locating gas-fired plants in Beijing

Large demand and output gap: According to China National Power Industry Statistical Bulletin 2010, the total power generation in Beijing in 2010 was 27.0 TWh, which is 53 TWh less than the power consumed for the same period. And the output and demand gap is filled by power sources from outside Beijing and therefore additional local power sources are needed in Beijing.

Electricity consumption pattern: Compared to traditional coal-fired power plants, gas-fired power plants are better-suited to be a power source in Beijing due to the special electricity consumption pattern in Beijing.

As a result of PRC's increasing urbanization process, residential and commercial power consumption as a percentage of total power consumption has been expanding. In regions with a relatively low heavy industry presence, such as Beijing, the gap between the peak and trough consumption is significantly larger than regions with a larger heavy industry presence, such as Ningxia, Shanxi province and Qinghai province. The gap between the peak and trough power consumption in Beijing was 54%, compared to the latter regions of 18-24%. In terms of daily peak and trough electricity consumption (or daily fluctuations in electricity consumption), Beijing is ranked no. 5 out of 28 provinces in China.

As gas-fired power plants are designed to cope with frequent power start-ups, it is more capable in satisfying ad-hoc demand for electricity dispatch, which is well-suited to regions like Beijing that has a large daily fluctuation in power consumption. We believe the fluctuations will increase as a result of a more rapid urbanization process in China, increasing the needs of gas-fired power plants in Beijing.

Higher growth than industry average: The "Energy Development Plan of Beijing for the 12th Five-year plan", target to raise natural gas consumption to 18bn m³ by 2015 from 7.5 bn m³ in 2010, representing CAGR of 19.1%. By strategically locating the gas-fired power plants in Beijing, we expect the group's gas-fired segment can enjoy a higher growth than the industry average of 16.0%.



High growth supported by huge pipeline projects

As Beijing took the lead to monitor PM2.5 (particulate matter with a diameter of 2.5 millimeters in the atmosphere) in 2011, the Beijing Municipal Commission of Development and Reform (the BJPC) has compiled specific implementation plan that aligns the “Energy Development Plan of Beijing for the 12th Five-year plan” to speed up the implementation of “Four Major Thermal Power Centers” projects, which is to build gas cogeneration plants in the northeast, northwest, southeast and southwest of the metropolitan area in Beijing to achieve the goal of “coal-free within the 5th ring road”.

As a result, the approval process for the gas-fired cogeneration unit construction and operation has been speeded up. Of the “Four Major Thermal Power Centers” projects, the group currently held 3 projects with an installed capacity of 2,991MW. In particular, the operation of Jingxi Gas-fired Power Project will be advanced from 2014 to 2013. Hence, the increase in installed capacity will be reflected earlier in the group’s income statements.

Gas-Fired Power Project of the group

| Location | Projects | Commencement | Installed capacity (MW) |
|--------------------------------|----------------------------------|-----------------------------------------|-------------------------|
| Southwest Thermal Power Centre | Jingqiao Gas-Fired Power Project | 2012 | 838 |
| Northwest Thermal Power Centre | Gaoantun Gas-fired Power Project | 2013 (Approved in 2011) | 845 |
| Northwest Thermal Power Centre | Jingxi Gas-fired Power Project | 2013 (Preliminary approval was granted) | 1,308 |
| Total: | | | 2,991 |

Source: BJCE

Apart from the gas-fired projects, the group also has a strong portfolio of wind power pipeline projects. As at 30 Jun 2011, the wind power pipeline projects of the group amounted to 4,791MW.

We expect the group’s total consolidated installed capacity will increase by 73.6% YoY to 4,337MW by the end of 2012 (2011:2,499MW), as Jingqiao Gas-Fired Power Project with installed capacity of 838MW commence operation in Oct 2012. We believe a stronger growth can be seen in 2013 as Gaoantun Gas-fired Power Project and Jingxi Gas-fired Power Project, together with Tier 2 and Tier 3 wind pipeline projects come into stream. Driven by both the gas and wind sector, we expect the group’s installed capacity will increase 100.4% YoY to 8,694MW by the end of 2013.



Wind power and hydro power pipeline projects of the group

| As at Jun 2011 | Location | No. of projects | Consolidated est capacity MW | Est CAPEX Rmb mn |
|---------------------------------|-------------------|-----------------|---------------------------------|---------------------|
| Wind* | | | | |
| Tier 1 | Ningxia | 1 | 49.5 | 346.5 |
| | Liaoning Province | 1 | 49.5 | 321.8 |
| Subtotal | | 2 | 99.0 | 668.3 |
| Tier 2 | Inner Mongolia | 8 | 1,147.5 | 7,533.0 |
| | Ningxia | 4 | 198.0 | 1,287.0 |
| | Beijing | 1 | 49.5 | 346.5 |
| Subtotal | | 13 | 1,395.0 | 9,166.5 |
| Tier 3 | Inner Mongolia | 10 | 2,998.0 | 19,587.0 |
| | Beijing | 3 | 199.0 | 1,318.3 |
| | Hebei Province | 1 | 100.0 | 650.0 |
| Subtotal | | 14 | 3,297.0 | 21,555.3 |
| Total - Wind | | 29 | 4,791.0 | 31,390.1 |
| Hydro and others | | | | |
| | Beijing | 2 | 34.6 | 553.4 |
| | Yunnan Province | 2 | 34.0 | 272.0 |
| | Ningxia | 1 | 10.0 | 160.0 |
| Total – Hydro and others | | 5 | 78.6 | 985.4 |

Source: BJCE

*Tier 1 projects: Pipeline projects that have received all relevant project initiation approvals from the PRC government.

Tier 2 projects: Pipeline projects the the group have entered into investment and development agreements with local governments; preliminary assessment of wind resources has been conducted; and internal approval from the group's management has been obtained or is under review

Tier 3 projects: Pipeline projects that obtained investment and development agreements or preliminary memorandum of understanding from relevant government authorities.



Strong shareholder background

As the group has short listing track record, the investment industry may not realize the financial strength and business background of its parent group - Beijing Energy Investment Holding Co. Ltd (BEIH). We find BJCE has a strong parent group which not only reduces business risks of BJCE but also creates synergy to BJCE's business.

BEIH, which owns 4,179mn of BJCE's domestic shares (unlisted shares representing 67.96% of total share capital), is the ultimate shareholder of the group. BEIH is a state-owned investment enterprise established in 2004 which is wholly owned by the Municipal Government of Beijing.

As the investing and financing entity for electric power constructions in Beijing, BEIH manages investment funds of electric power and energy conservation for the Beijing Municipal Government. Funds are invested into 5 major areas, which are electric power, properties, infrastructure, renewable energy R&D and finance and securities.

BEIH recorded net profit of Rmb1,437.9mn and ROAA of 1.61% in FY10. As at the end of 31 Dec 2010, BEIH has total assets of Rmb90.0bn, of which 23.2% are consolidated from the group. There is a possibility of up to Rmb69.1bn asset injection into the group which can potentially generate net profit of Rmb10bn. Although ROAA of BEIH is lower than the group's of 2.43% in 2010, with its fund raising ability in the bond markets, we believe BEIH has sufficient resources to improve the economic returns of its assets.

As the controlling shareholder of BJCE, we believe BEIH can provide BJCE with strong resource assurance for both project sourcing and implementation of projects.

Key financials data of the group and BEIH

| FY ended 31 Dec (Rmb mn) | 2009 | 2010 | As of 31 Dec (Rmb mn) | 2009 | 2010 |
|--------------------------------|--------------|--------------|------------------------------|-----------------|-----------------|
| Revenue | | | Total assets | | |
| BEIH | 10,780.5 | 14,389.4 | BEIH | 88,860.6 | 90,009.3 |
| The group | 4,785.5 | 3,624.8 | The group | 19,374.6 | 20,849.3 |
| Others | 5,995.0 | 10,764.6 | Others | 69,486.0 | 69,160.0 |
| % (The group/ BEIH) | 44.4% | 25.2% | % (The group/ BEIH) | 21.8% | 23.2% |
| Consolidated net profit | | | Equity | | |
| BEIH (excl MI) | 1,290.7 | 1,437.9 | BEIH (excl MI) | 28,513.9 | 25,059.9 |
| The group (85.75% ownership) | 154.0 | 419.2 | The group (85.75% ownership) | 4,524.6 | 5,800.3 |
| Others | 1,136.7 | 1,018.7 | Others | 23,989.3 | 19,259.6 |
| % (The group/ BEIH) | 11.9% | 29.2% | % (The group/ BEIH) | 15.9% | 23.1% |

Source: BEIH's annual results, BJCE, ABCI Securities



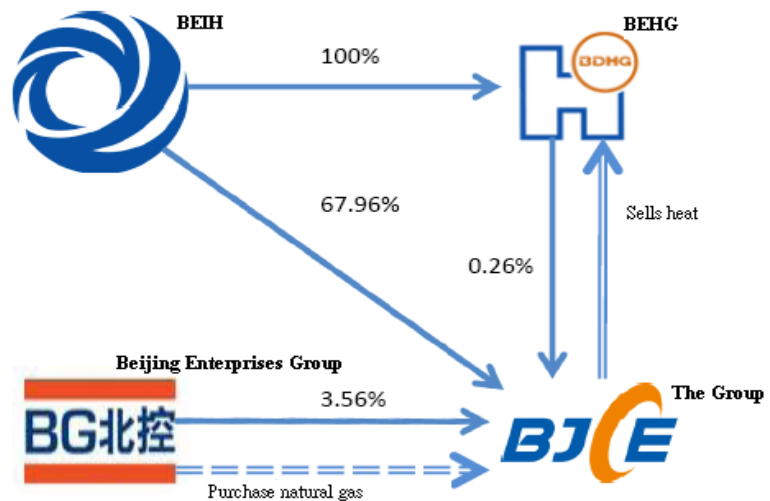
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On 29 Dec 2011, the Beijing municipal government announced the reorganization of BEIH and Beijing District Heating (Group) Co, Ltd (BDHG), in which the state-owned assets of BDHG shall be transferred to BEIH at nil consideration. BDHG, a state-owned enterprise, is the nation's largest concentrated heat supply corporation. Given that BEIH is a major heat customer of the group, the reorganizing reduce business risks of being unable to dispatch the additional heat output from the new installed capacity. In addition, the reorganization represents a major strategic move of integrating the industry chain in Beijing, which extends the control of resources by BEIH and further enhances its leading position in the energy industry in Beijing.



Source: BJCE

Financial summary of BEIH

| FY ended Dec 31 (Rmb mn) | 2006 | 2007 | 2008 | 2009 | 2010 |
|-----------------------------|------------------|-----------------|-----------------|-----------------|-----------------|
| Revenue | 6,394.1 | 8,716.6 | 7,399.2 | 10,780.5 | 14,389.4 |
| Change (YoY) | | 36.3% | -15.1% | 45.7% | 33.5% |
| Gross Profit | 2,362.8 | 3,567.6 | 663.8 | 1,742.8 | 2,569.6 |
| Net profit | 1,023.6 | 1,159.8 | 104.8 | 1,290.7 | 1,437.9 |
| Change (YoY) | | 51.0% | -81.4% | 162.5% | 47.4% |
| Inventories | 1,709.9 | 967.5 | 2,446.8 | 2,817.6 | 5,328.9 |
| Accounts & Notes Receivable | 711.1 | 738.8 | 1,062.3 | 1,825.5 | 2,179.0 |
| Cash & Near Cash Items | 3,313.1 | 3,048.7 | 2,789.3 | 3,682.3 | 4,386.1 |
| Total Current Assets | 10,000.9 | 7,947.4 | 10,196.5 | 12,572.5 | 14,784.5 |
| Total Non-current Assets | 32,122.3 | 42,642.0 | 58,852.7 | 76,288.1 | 75,224.8 |
| Total Assets | 42,123.2 | 50,589.4 | 69,049.2 | 88,860.6 | 90,009.3 |
| Total Liabilities | 26,087.4 | 33,478.5 | 43,969.7 | 55,692.9 | 59,138.5 |
| Total Equity | 11,995.80 | 12,743.5 | 20,432.6 | 28,513.9 | 25,059.9 |
| Key ratios (%) | | | | | |
| Gross margin | 37.0 | 40.9 | 9.0 | 16.2 | 17.9 |
| EBITDA margin | 45.0 | 43.5 | 15.0 | 22.9 | 25.6 |
| EBIT margin | 30.3 | 33.2 | -0.5 | 7.5 | 11.1 |
| Pretax profit margin | 22.7 | 27.4 | 1.9 | 13.9 | 13.9 |
| Net profit margin | 16.0 | 13.3 | 1.4 | 12.0 | 10.0 |
| ROAA | 2.66 | 2.50 | 0.18 | 1.63 | 1.61 |
| ROAE | 8.39 | 9.38 | 0.63 | 5.27 | 5.37 |

Source: BEIH

**Strong earnings outlook but constrained by high gearing**

Backed by on-grid tariff hike (the group's on-grid tariff is raised from Rmb0.538/kwh in Apr 2011 to Rmb0.573/kwh in Dec 2011, up, 6.5%) in Dec 2011 and operation commencement of Jingqiao gas-fired plant in Oct 2012, we forecast the group's net profit to jump by 28.2% YoY to Rmb1,029.7mn in FY12, and 35.1% YoY to Rmb1,390.7mn in FY13. A stronger growth is expected in FY13 as the installed capacity of Jingqiao gas-fired plant can be fully reflected in the financial year while estimated of 1,945MW of wind capacity is expected to come on stream. We expect ROAA of the group to drop slightly from 3.48% in 2011 to 3.38% in FY12 and 3.39% in FY13.

Accompany with the aggressive expansion plan, management has given CAPEX guidance of Rmb12bn in both FY12 and FY13 compared to Rmb2.8bn in FY11. We estimate that the group's net debt will surge 93% YoY to Rmb22,872.2mn in FY12 and net debt to assets ratio increased from 46.6% in FY11 to 64.2% in FY12. We expect the group will start to generate positive free cash flow only from 2014 onwards. But the high level of debt will boost up the group's ROAE. We expect the group's ROAE to increase from 10.3% in FY11 to 11.4% in FY12 and 14.2% in FY13.

Valuation

We appraise the equity of the group in two different approaches. We use comparison method to evaluate the group against the market valuation of comparable peers. We also use the discount cash flow method to value the equity value of the group.

Valuation Summary

| Valuation method | Appraised share value HK\$/share | Appraised share value / Estimated FY12 EPS |
|--------------------|----------------------------------|--------------------------------------------|
| PER rating | 1.77 | 8.60x |
| PB rating | 1.97 | 9.36x |
| Discount cash flow | 2.05 | 9.94x |
| Overall range | 1.77-2.05 | 8.60-9.94x |

Source: ABCI Securities estimates



Industry Outlook

Clean and renewable energy will be the major driver for power consumption growth

China experienced growth in real GDP at CAGR of 10.7% in between 2001 and 2010. In line with the growth of the economy, power generation in China grew at CAGR of 12.0% for the same period. Elasticity of real GDP growth and power generation growth ranged from 0.57x to 1.55x during 2001 and 2011 and the average ratio was 1.19x. According to the 12th Five-Year Plan, the PRC government expects to achieve an average annual GDP growth of 7%. Based on average elasticity ratio of 1.19x, we expect power generation to grow at an average annual rate of 8.3% for 2012-2015.

Real GDP/ Power generation elasticity

| | Real GDP YoY Growth | Power Generation YoY Growth | Elasticity ratio |
|------|------------------------|--------------------------------|---------------------|
| 2001 | 8.3% | 9.2% | 1.11 |
| 2002 | 9.1% | 11.7% | 1.29 |
| 2003 | 10.0% | 15.5% | 1.55 |
| 2004 | 10.1% | 15.3% | 1.52 |
| 2005 | 10.4% | 13.5% | 1.30 |
| 2006 | 11.6% | 13.7% | 1.18 |
| 2007 | 13.0% | 14.9% | 1.15 |
| 2008 | 9.6% | 5.5% | 0.57 |
| 2009 | 9.1% | 7.1% | 0.77 |
| 2010 | 10.0% | 13.3% | 1.33 |
| 2011 | 9.20% | 11.98% | 1.30 |

Remark: Elasticity ratio = Real GDP growth/Power output growth

Source: China Electric Council; NBSC

Although power consumption growth rate is expected to slow down, but clean and renewable energy will post more significant growth in coming years due to a planned change in electricity generation structure. According to the 11th Five-year plan, the PRC government has set a target of cutting carbon dioxide emissions per unit of GDP by 40% to 45% by 2020 from the 2005 level. In addition, the Medium and Long-Term Development Plan for Renewable Energy (可再生能源中長期發展規劃) which is issued by the NDRC in 2007, sets out the targets for renewable energies that 15% of total energy consumption will come from non-fossil fuel sources by 2020 and the 12th Five-year plan have a goal of achieving 11.4% of non-fossil fuel energy to total energy consumption, representing 3.1ppts increase from 2011 (8.3%). To achieve the goal, it is estimated the consolidated installed capacity of wind, solar and nuclear will increase at CAGR of over 20% for 2011-2015, compared with 8.5% of the total consolidated capacity of all energy sources in China.



Consolidated installed capacity of different energy sources

| GW | 2010 | 2011 | 2015 | 11-15 CAGR |
|----------------|------------|--------------|--------------|-------------|
| Thermal | 707 | 739 | 928 | 5.9% |
| Hydro | 213 | 230 | 301 | 7.0% |
| Wind* | 31 | 45 | 100 | 22.1% |
| Solar | 1 | 2 | 15 | 62.7% |
| Nuclear | 11 | 13 | 43 | 36.0% |
| Others | 27 | 26 | 76 | 30.2% |
| Total | 990 | 1,055 | 1,463 | 8.5% |

Source: National Energy Administration

*Connected capacity



Gas Power Industry in China

Strong growth supported by abundant of resources

Natural gas, a type of fossil fuel, is considered to be cleaner than oil and coal because it produces a smaller amount of pollutants compared to coal and oil.

Fossil fuel emission levels – Pounds per bn Btu of energy input

| Pollutant | Natural gas | Oil | Coal |
|-----------------|-------------|---------|---------|
| Carbon Dioxide | 117,000 | 164,000 | 208,000 |
| Carbon Monoxide | 40 | 33 | 208 |
| Nitrogen Oxides | 92 | 448 | 457 |
| Sulfur Dioxide | 1 | 1,122 | 2,591 |
| Particulates | 7 | 84 | 2,744 |
| Mercury | 0 | 0 | 0 |

Source: EIA

According to BP Review, consumption of natural gas in the PRC has increased from 24.5bn m³ in 2000 to 109.0bn m³ in 2010, representing a CAGR of 16.1%. Due to its cleaner nature, natural gas consumption is supported by the government as well as renewable energy. One of the goal's of 12th Five-year plan is to raise the ratio of natural gas consumption to total energy consumption from <5% in 2011 to 7-8% in 2015. Natural gas consumption is expected to reach 230bn m³ in 2015, representing a CAGR growth of 16.0% during 2011-2015.

We believe the strong growth is backed by a huge amount of resources owned by China. It is estimated that China had a total of 2.8tn m³ of proven natural gas reserves at the end of 2010, compared with 1.4tn m³ in 2000, according to BP Review.

Gas-fired power is well suited to meet Beijing's electricity demand

As gas-fired power plants are designed to cope with frequent power start-ups, it is more capable in satisfying ad-hoc demand for electricity dispatch, which is well-suited to regions like Beijing that is experiencing peak load increase. According to Beijing's 12th Five-year plan, natural gas consumption will increase to 18bn m³ in 2015 from 7.5bn m³ in 2010, representing CAGR of 19.1%, which outpaced industry's growth rate of 16%.



Well-planned pipelines in Beijing, the country’s capital

With an expected increase in natural gas consumption in Beijing, the PRC government has a well-planned pipeline infrastructure to improve the stability of natural gas supply in the country’s capital.

Natural gas is transported to Beijing through the Shaanxi-Beijing Gas Pipeline which is the only gas pipeline project that directly reaches and supplies gas to Beijing. The Shaanxi-Beijing Gas Pipeline was connected to the longest pipeline in the PRC, namely the West-East Gas Pipeline in 2009, and has been supplying gas to Beijing since 2010. The construction of Phase II of the West-East Gas Pipeline is still in progress and we believe by introducing other gas sources, the development of the pipeline will improve the stability of gas supply to Beijing.

The Shaanxi-to-Beijing natural gas pipelines consist of three pipelines (or phase I/II/III). The latest line came on stream in Jan 2011, following the launch of the first line in Oct 1997 and the second in Jul 2005. The 3 pipelines have a total design capacity of 35bn m³ which is well above the planned natural gas consumption of 18bn m³ in Beijing in 2015.

Major gas pipelines in China



Source: EIA, CNPC



Wind industry in PRC

China wind energy is expected to experience outstanding growth

China has been ranked the largest country in terms of total wind installed capacity since 2010. As of 31 Dec 2011, China total wind installed capacity reached 62 GW (including unconnected capacity) in 2011, compared with 47 GW of the second largest country, USA. It is expected China will continue to be the largest wind power country for next 3 years till 2015. Consolidated capacity will grow at a CAGR of 21.8% for 2010-2015 compared with 19.2% of USA.

Consolidated installed capacity growth of wind power

| MW | PRC | India | Rest of Asia | US | Canada |
|-------------|---------|--------|--------------|--------|--------|
| 2010 | 44,733 | 13,064 | 3,352 | 40,181 | 4,009 |
| 2011E | 62,733 | 4,864 | 4,187 | 47,181 | 4,859 |
| 2012E | 74,733 | 16,864 | 5,367 | 56,181 | 6,359 |
| 2013E | 89,733 | 19,364 | 6,875 | 66,181 | 8,010 |
| 2014E | 104,733 | 21,864 | 8,365 | 80,406 | 9,906 |
| 2015E | 119,733 | 24,364 | 9,684 | 96,569 | 11,977 |
| 10-15E CAGR | 21.8% | 13.3% | 23.6% | 19.2% | 24.5% |

Source: Garrad Hassan

The strong growth of wind industry in China is partly supported by the abundant wind resources in China. According to the Medium and Long-Term Development Plan for Renewable Energy, the technically exploitable wind resources on land amount to 300 GW and total exploitable wind resources could reach 1,000GW including offshore wind resources.

Wind resources in China

| Province | Technically exploitable wind resources GW |
|----------------|----------------------------------------------|
| Inner Mongolia | =150 |
| Xinjiang | >100 |
| Gansu | >100 |
| Hebei | >40 |
| Jiangsu | >10 |
| Jilin | >10 |

Source: Chinese Renewable Energy Industries Association



Wind farm operators to benefit from grid investment

Due to the rapid development of the installed capacity, the installation of wind capacity has outpaced the development of grid infrastructure, leading to wind curtailment problem. In 2011, 30% of consolidated installed wind capacity is not connected to grid.

However, China is putting effort in improving grid connection in order to achieve China's renewable energy target of 11.4% by 2015. According to NDRC, China will implement Renewable Portfolio Standards (RPS) in 2012, setting a renewable energy quota for each province's total power consumption, and total power purchased by grid companies from generation companies. During 2011-2015, it is expected the government will invest Rmb500bn in grid construction in order to develop a more technically-advance power grid system. Wind farm operators will benefit in terms of higher utilization hours, resulting in higher ROA.

Favorable policies

- **Mandatory Purchase and Dispatch Priority:** The Renewable Energy Law provides that grid companies must purchase the full amount of on-grid electricity generated by approved renewable energy projects within their coverage. And that the Provisional Measures on the Dispatch of Energy Saving Power Generation provides that power producers are entitled to enjoy the highest dispatch priority if they use renewable energy including wind, solar and tidal power.
- **Taxation:** Approved wind projects are fully exempted from enterprise income tax for 3 years starting from the year when operating income is first derived from sales of electricity, followed by 50% exemption from enterprise income tax for another 3 years thereafter.



Business Analysis and Financial Forecast

Our profit forecast is based on various assumptions. In particular, consolidated installed capacity, gross generation, net generation, average utilization hours and average on-grid tariffs are the 5 major assumptions we made in each power segment of the group.

Major Assumptions

| FY ended Dec 31 | 2008 | 2009 | 2010 | 2011 | 2012F | 2013F |
|---------------------------------------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Consolidated installed capacity (MW) | 1,361 | 2,008 | 2,255 | 2,499 | 4,337 | 8,694 |
| Gas | 1,190 | 1,190 | 1,190 | 1,190 | 2,228 | 4,670 |
| Wind | 165 | 811 | 1,059 | 1,303 | 1,845 | 3,760 |
| Hydro | 6 | 6 | 6 | 6 | 264 | 264 |
| Gross generation (GWh) | 3,368 | 4,680 | 7,390 | 7,745 | 9,807 | 17,779 |
| Gas | 3,092 | 3,855 | 5,042 | 5,198 | 5,793 | 11,199 |
| Wind | 270 | 802 | 2,326 | 2,525 | 3,544 | 5,682 |
| Hydro | 6 | 23 | 22 | 22 | 471 | 898 |
| Net generation (GWh) | 3,316 | 4,558 | 7,216 | 7,554 | 9,621 | 17,442 |
| Gas | 3,044 | 3,748 | 4,906 | 5,058 | 5,677 | 10,975 |
| Wind | 266 | 787 | 2,288 | 2,474 | 3,473 | 5,569 |
| Hydro | 6 | 23 | 22 | 22 | 471 | 898 |
| Av utilization hours | | | | | | |
| Gas | 3,575 | 3,239 | 4,237 | 4,250 | 4,250 | 4,250 |
| Wind | 2,156 | 2,243 | 2,369 | 2,000 | 2,150 | 2,150 |
| Hydro | 892 | 3,529 | 3,438 | 3,400 | 3,400 | 3,400 |
| Av on-grid tariffs (Rmb/kwh) | | | | | | |
| Gas | 0.4202 | 0.4825 | 0.5211 | 0.5580 | 0.5915 | 0.6151 |
| (YoY) | | 14.8% | 8.0% | 7.1% | 6.0% | 4.0% |
| Wind | 0.5015 | 0.5412 | 0.5281 | 0.5418 | 0.5548 | 0.5659 |
| (YoY) | | 7.9% | -2.4% | 2.6% | 2.4% | 2.0% |
| Hydro | 0.2734 | 0.3133 | 0.2892 | 0.3227 | 0.3292 | 0.3358 |
| (YoY) | | 14.6% | -7.7% | 11.6% | 2.0% | 2.0% |

F: ABCI Securities estimates

Source: BJCE (for historical figures only), ABCI Securities estimates



Revenue composition

Assuming the group manages to secure funding sources internally or externally to complete the pipeline projects in 2012 and 2013, we estimate the group to post strong revenue growth in FY12 and FY13 as new installed capacity comes into stream. We expect the group's revenue to increase by 30.4% YoY to Rmb5,092.2mn in FY12 and 78.8% YoY to Rmb9,104.4mn respectively in FY13. We estimate gas-fired power segment will continue to be the main contributor of total revenue, which will account for over 65% of total revenue in FY12 and FY13; while wind power will account for over 28% of total revenue in FY12 and FY13.

Revenue Projection

| FY ended Dec 31 (Rmb mn) | 2008 | 2009 | 2010 | 2011 | 2012F | 2013F |
|---------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Gas | 1,163.7 | 1,893.1 | 2,553.8 | 2,699.7 | 3,364.2 | 6,238.6 |
| Sales of electricity | 1,093.4 | 1,545.7 | 2,185.2 | 2,308.9 | 2,787.0 | 5,603.7 |
| Sales of steam | 70.2 | 346.2 | 368.6 | 349.9 | 577.2 | 634.9 |
| Other sales | 0.1 | 1.2 | 0.0 | 41.0 | 0.0 | 0.0 |
| Wind | 115.3 | 367.8 | 1,032.5 | 1,176.7 | 1,599.4 | 2,615.7 |
| Sales of electricity | 114.1 | 364.1 | 1,032.5 | 1,145.7 | 1,599.4 | 2,615.7 |
| Sales of steam | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other sales | 1.2 | 3.7 | 0.0 | 31.0 | 0.0 | 0.0 |
| Hydro | 59.5 | 148.9 | 56.6 | 28.7 | 128.6 | 250.2 |
| Sales of electricity | 14.0 | 61.6 | 54.4 | 4.9 | 128.6 | 250.2 |
| Sales of steam | 8.8 | 10.8 | 0.0 | 1.5 | 0.0 | 0.0 |
| Other sales | 36.7 | 76.4 | 2.2 | 22.3 | 0.0 | 0.0 |
| Segment total | 1,338.5 | 2,409.8 | 3,642.8 | 3,803.2 | 5,092.2 | 9,104.4 |
| Add service concession construction revenue | 918.1 | 2,375.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Revenue | 2,256.7 | 4,785.5 | 3,642.8 | 3,905.0 | 5,092.2 | 9,104.4 |
| Composition | | | | | | |
| Gas | 86.9% | 78.6% | 70.1% | 69.1% | 66.1% | 68.5% |
| Sales of electricity | 94.0% | 81.7% | 85.6% | 85.5% | 82.8% | 89.8% |
| Sales of steam | 6.0% | 18.3% | 14.4% | 13.0% | 17.2% | 10.2% |
| Other sales | 0.0% | 0.1% | 0.0% | 1.5% | 0.0% | 0.0% |
| Wind | 8.6% | 15.3% | 28.3% | 30.1% | 31.4% | 28.7% |
| Sales of electricity | 99.0% | 99.0% | 100.0% | 97.4% | 100.0% | 100.0% |
| Sales of steam | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Other sales | 1.0% | 1.0% | 0.0% | 2.6% | 0.0% | 0.0% |
| Hydro | 4.4% | 6.2% | 1.6% | 0.7% | 2.5% | 2.7% |
| Sales of electricity | 23.6% | 41.4% | 96.1% | 17.0% | 100.0% | 100.0% |
| Sales of steam | 14.8% | 7.3% | 0.0% | 5.2% | 0.0% | 0.0% |
| Other sales | 61.6% | 51.4% | 3.9% | 77.8% | 0.0% | 0.0% |
| Segment total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Revenue Growth (YoY) | | | | | | |
| Gas | - | 62.7% | 34.9% | 5.7% | 24.6% | 85.4% |
| Wind | - | 219.0% | 180.7% | 14.0% | 35.9% | 63.5% |
| Hydro | - | 150.3% | -62.0% | -49.3% | 348.0% | 94.6% |
| Segment total | - | 80.0% | 51.2% | 7.2% | 30.4% | 78.8% |
| Total Revenue | - | 112.1% | -23.9% | 7.2% | 30.4% | 78.8% |

F: ABCI Securities estimates

Source: BJCE (for historical figures only), ABCI Securities estimates



Profit Forecast

| FY ended Dec 31 (Rmbmn) | 2008 | 2009 | 2010 | 2011 | 2012F | 2013F |
|-------------------------------------------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Revenue | 2,256.7 | 4,785.5 | 3,624.8 | 3,905.0 | 5,092.2 | 9,104.4 |
| Other income | 502.2 | 580.2 | 609.0 | 962.1 | 1,225.0 | 1,230.0 |
| Total | 2,758.9 | 5,365.7 | 4,233.9 | 4,867.2 | 6,317.2 | 10,334.4 |
| Gas consumption | (1,008.5) | (1,458.6) | (1,970.5) | (2,110.1) | (2,541.6) | (5,061.2) |
| Service concession construction costs | (918.1) | (2,375.7) | 0.0 | 0.0 | 0.0 | 0.0 |
| D&A | (253.6) | (496.4) | (758.1) | (767.8) | (897.7) | (1,197.7) |
| Personnel costs | (72.1) | (119.4) | (184.3) | (194.8) | (254.6) | (318.7) |
| Repairs and maintenance | (76.0) | (98.7) | (104.5) | (102.7) | (152.8) | (273.1) |
| Other expenses | (196.8) | (335.9) | (235.2) | (195.1) | (315.9) | (516.7) |
| Other gains and losses | 10.3 | (3.6) | 27.8 | (6.0) | 0.0 | 0.0 |
| EBIT | 244.1 | 477.3 | 1,009.0 | 1,490.7 | 2,154.6 | 2,967.0 |
| Interest income | 21.9 | 18.0 | 12.7 | 15.3 | 13.0 | 13.0 |
| Finance costs | (214.3) | (299.2) | (500.3) | (582.6) | (969.7) | (1,269.7) |
| Share of results of associates | 9.9 | 15.6 | 55.2 | 147.4 | 200.0 | 225.0 |
| Share of results of jointly controlled entities | 7.6 | 5.1 | 0.4 | (0.3) | 0.4 | 0.4 |
| EBT | 69.2 | 216.7 | 577.1 | 1,070.5 | 1,398.4 | 1,935.8 |
| Tax | (20.0) | (17.8) | (56.3) | (175.6) | (251.7) | (387.2) |
| MI | (4.3) | (19.4) | (31.9) | (91.5) | (117.0) | (158.0) |
| Net Profit | 45.0 | 179.6 | 488.9 | 803.5 | 1,029.7 | 1,390.7 |
| D&A | (253.6) | (496.4) | (758.1) | (767.8) | (897.7) | (1,197.7) |
| EBITDA | 497.7 | 973.7 | 1,767.2 | 2,258.5 | 3,052.3 | 4,164.8 |
| Dividends (post-listing) | - | - | - | 53.7 | 205.9 | 278.1 |
| Dividends (pre-listing) | - | 13.9 | 247.9 | 609.5 | - | - |
| No. of issued shares at end of period (mn) | 2,572.4 | 3,676.7 | 4,778.5 | 6,032.2 | 6,149.9 | 6,149.9 |
| Domestic shares (mn shares) | | | | 4,524.1 | 4,512.4 | 4,512.4 |
| H-shares (mn shares) | | | | 1,508.1 | 1,637.5 | 1,637.5 |
| Per share value (Rmb) | | | | | | |
| Pro-forma EPS | 0.0175 | 0.0488 | 0.1023 | 0.1332 | 0.1674 | 0.2261 |
| NBV (Rmb/share) | 1.4440 | 1.4351 | 1.4155 | 1.4558 | 1.4875 | 1.6802 |
| DPS (post-listing) | - | - | - | 0.00874 | 0.03349 | 0.04523 |
| Net debt per share | (2.3104) | (3.0713) | (2.2969) | (1.9559) | (3.7191) | (5.0857) |

F: ABCI Securities estimates

Source: BJCE (for historical figures only), ABCI Securities estimates



Balance Sheet Forecast

| As of Dec 31 (Rmbmn) | 2008 | 2009 | 2010 | 2011 | 2012F | 2013F |
|-----------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| PPE | 8,162.6 | 11,104.1 | 11,812.7 | 14,044.4 | 25,375.2 | 36,376.4 |
| Intangible assets | 1,757.6 | 3,995.9 | 3,806.3 | 3,627.5 | 3,408.4 | 3,209.4 |
| Others | 1,358.8 | 2,256.2 | 2,707.3 | 3,270.6 | 3,270.6 | 3,270.9 |
| Non-current assets | 11,279.1 | 17,356.2 | 18,326.3 | 20,942.5 | 32,054.1 | 42,856.7 |
| Inventories | 85.8 | 35.0 | 35.1 | 51.4 | 60.2 | 139.4 |
| Trade and bill receivables | 301.7 | 849.8 | 1,157.4 | 1,401.7 | 1,667.5 | 2,323.4 |
| Other receivables, deposits and prepayments | 126.5 | 85.4 | 105.7 | 131.8 | 136.1 | 342.8 |
| Other current assets | 38.1 | 294.3 | 303.6 | 330.2 | 330.2 | 330.2 |
| Cash and cash equivalents | 569.5 | 753.9 | 638.8 | 2,443.4 | 1,369.9 | 465.4 |
| Assets classified as held for sale | 0.0 | 0.0 | 282.4 | 0.0 | 0.0 | 0.0 |
| Current assets | 1,121.7 | 2,018.4 | 2,523.0 | 4,358.6 | 3,563.9 | 3,601.3 |
| Total assets | 12,400.8 | 19,374.6 | 20,849.3 | 25,301.1 | 35,618.0 | 46,457.9 |
| Trade and other payables | 1,317.3 | 1,563.5 | 1,644.3 | 1,367.0 | 1,418.3 | 3,573.5 |
| Amounts due to related parties | 246.3 | 97.6 | 157.6 | 260.7 | 320.0 | 320.0 |
| Bank and other borrowings-due within one year | 2,718.2 | 3,599.1 | 2,731.3 | 6,087.5 | 6,087.5 | 6,087.5 |
| Income tax payable | 2.0 | 9.3 | 43.5 | 65.8 | 65.8 | 65.8 |
| Deferred income-current portion | 19.9 | 27.9 | 90.6 | 160.1 | 0.0 | 0.0 |
| Others | 0.0 | 0.0 | 176.1 | 0.0 | 0.0 | 0.0 |
| Current liabilities | 4,303.8 | 5,297.3 | 4,843.4 | 7,941.1 | 7,891.6 | 10,046.8 |
| Bank and other borrowings-due after one year | 3,794.7 | 8,461.1 | 8,883.4 | 8,154.6 | 18,154.6 | 25,654.6 |
| Deferred tax liabilities | 0.0 | 0.0 | 4.2 | 3.8 | 3.8 | 3.8 |
| Deferred income | 47.4 | 50.7 | 44.7 | 42.1 | 42.1 | 42.1 |
| Other non-current liabilities | 99.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Non-current liabilities | 3,941.8 | 8,511.7 | 8,932.4 | 8,200.5 | 18,200.5 | 25,700.5 |
| Total liabilities | 8,245.6 | 13,809.1 | 13,775.8 | 16,141.7 | 26,092.1 | 35,747.3 |
| Net assets | 4,155.2 | 5,565.5 | 7,073.5 | 9,159.4 | 9,525.9 | 10,710.6 |
| Capital and reserves | | | | | | |
| Share capital | 500.0 | 1,006.4 | 5,000.0 | 6,032.2 | 6,032.2 | 6,032.2 |
| Reserves | 3,214.7 | 4,270.1 | 1,764.2 | 2,749.4 | 3,115.9 | 4,300.6 |
| Equity attributable to owners of the Company | 3,714.7 | 5,276.6 | 6,764.2 | 8,781.6 | 9,148.1 | 10,332.8 |
| MI | 440.5 | 289.0 | 309.3 | 377.8 | 377.8 | 377.8 |
| Total Equity | 4,155.2 | 5,565.5 | 7,073.5 | 9,159.4 | 9,525.9 | 10,710.6 |

F: ABCI Securities estimates

Source: BJCE(for historical figures only), ABCI Securities estimates



Cash Flow Forecast

| FY ended Dec 31 (Rmbmn) | 2008 | 2009 | 2010 | 2011F | 2012F | 2013F |
|--------------------------------------------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|
| EBITDA | 497.7 | 973.7 | 1,767.2 | 2,258.5 | 3,052.3 | 4,164.8 |
| Change in inventories | 9.0 | (19.3) | (5.6) | (16.3) | (8.7) | (79.2) |
| Change in trade and bill receivables | (243.9) | (582.3) | (342.2) | (244.4) | (265.8) | (655.9) |
| Change in other receivables, deposits and prepayments | (50.9) | (57.2) | 155.9 | (26.0) | (4.3) | (206.7) |
| Change in amounts due from related parties | 1.9 | (0.7) | (15.0) | (19.6) | 0.0 | 0.0 |
| Change in trade and other payables | 105.6 | 36.9 | 9.5 | (277.3) | 51.3 | 2,155.2 |
| Change in amounts due related parties | 74.7 | (64.5) | 11.4 | 103.1 | 59.3 | 0.0 |
| Change in deferred income | 17.3 | 7.8 | 65.5 | 66.9 | (160.1) | 0.0 |
| Others | (1.1) | 12.4 | (38.5) | 0.0 | 0.0 | 0.0 |
| Cash (used in)/generated from operations | 410.4 | 306.8 | 1,608.1 | 1,844.8 | 2,723.9 | 5,378.1 |
| Income tax paid | (24.1) | (36.4) | (69.9) | (175.6) | (251.7) | (387.2) |
| CF from operating activities | 386.2 | 270.4 | 1,538.2 | 1,669.3 | 2,472.2 | 4,990.9 |
| CAPEX | (3,728.1) | (5,982.3) | (1,772.4) | (2,854.0) | (12,000.0) | (12,000.0) |
| Others | 84.8 | (151.6) | (159.5) | (613.8) | 13.0 | 13.0 |
| Cash flows from investing activities | (3,643.3) | (6,133.9) | (1,931.9) | (3,467.8) | (11,987.0) | (11,987.0) |
| New loans raised | 2,770.7 | 5,559.4 | (359.8) | 2,730.5 | 10,000.0 | 7,500.0 |
| Net proceeds from issue of shares | 0.0 | 0.0 | 0.0 | 1,550.0 | 0.0 | 0.0 |
| Dividends paid | 0.0 | 0.0 | (186.5) | (60.0) | (663.2) | (205.9) |
| Interest paid | (359.5) | (456.3) | (496.2) | (792.4) | (969.7) | (1,269.7) |
| Others | 1,045.0 | 944.8 | 1,323.7 | 0.0 | 134.2 | 67.2 |
| Cash flows from financing activities | 3,456.2 | 6,047.9 | 281.3 | 3,428.1 | 8,501.3 | 6,091.6 |
| Net (decrease)/increase in cash and cash equivalents | 199.2 | 184.4 | (112.4) | 1,629.5 | (1,013.5) | (904.5) |
| Cash and cash equivalents at beg of yr | 370.3 | 569.5 | 753.9 | 753.9 | 2,383.4 | 1,369.9 |
| Effect of foreign exchange rates, net | 0.0 | 0.0 | (0.9) | 0.0 | 0.0 | 0.0 |
| Cash and cash equivalents at end of year/period | 569.5 | 753.9 | 640.6 | 2,383.4 | 1,369.9 | 465.4 |

F: ABCI Securities estimates

Source: BJCE(for historical figures only), ABCI Securities estimates



Financial Ratio Analysis

| FY ended Dec 31 | 2008 | 2009 | 2010 | 2011 | 2012F | 2013F |
|---------------------------------|---------|--------|--------|---------|---------|---------|
| Profitability ratio | | | | | | |
| EBITDA margin | 22.1% | 8.2% | 48.8% | 57.8% | 59.9% | 45.7% |
| EBIT margin | 10.8% | 10.0% | 27.8% | 38.2% | 42.3% | 32.6% |
| Pre-tax profit margin | 3.1% | 4.5% | 15.9% | 27.4% | 27.5% | 21.3% |
| Net profit margin | 2.0% | 3.8% | 13.5% | 20.6% | 20.2% | 15.3% |
| ROAA | - | 1.13% | 2.43% | 3.48% | 3.38% | 3.39% |
| ROAE | - | 3.99% | 8.12% | 10.34% | 11.49% | 14.28% |
| Cost ratio | | | | | | |
| Gas consumption/revenue | -44.7% | -30.5% | -54.4% | -54.0% | -49.9% | -55.6% |
| D&A/revenue | -11.2% | -10.4% | -20.9% | -19.7% | -17.6% | -13.2% |
| Personnel costs/revenue | -3.2% | -2.5% | -5.1% | -5.0% | -5.0% | -3.5% |
| Repairs and maintenance/revenue | -3.4% | -2.1% | -2.9% | -2.6% | -3.0% | -3.0% |
| Other expenses/revenue | -8.7% | -7.0% | -6.5% | -5.0% | -5.0% | -5.0% |
| Effective tax rate | -28.84% | -8.21% | -9.75% | -16.40% | -18.00% | -20.00% |
| Leverage | | | | | | |
| Current ratio | 0.26 | 0.38 | 0.52 | 0.55 | 0.45 | 0.36 |
| Quick ratio | 0.24 | 0.37 | 0.51 | 0.54 | 0.44 | 0.34 |
| Total equity/total assets | 0.30 | 0.27 | 0.32 | 0.35 | 0.26 | 0.22 |
| Net debt/total equity | 160.0% | 214.0% | 162.3% | 134.4% | 250.0% | 302.7% |
| Working capital cycle | | | | | | |
| Inventory turnover days | | 4.6 | 3.5 | 4.0 | 4.0 | 4.0 |
| Trade receivables turnover days | | 87.0 | 101.1 | 119.6 | 110.0 | 80.0 |
| Other receivables turnover days | | 8.1 | 9.6 | 11.1 | 9.6 | 9.6 |
| Trade payables turnover days | | 144.1 | 185.9 | 221.3 | 200.0 | 180.0 |

ROAA= Net profit to the Group/average total assets

ROAE= Net profit to the equity owners of the company/average attributable equity to the owners of the company

EBITDA=EBIT + Depreciation & amortization

EBIT= Earnings before interest income, other income and expenses, finance cost and tax

F: ABCI Securities estimates

Source: BJCE (for historical figures only), ABCI Securities estimates



Sensitivity Analysis

As a gas-fired power plant operator, natural gas consumption amounted to Rmb1,970.5mn and Rmb2,110.1mn respectively in FY10 and FY11, which accounted for 60.6% and 62.6% of the group's total operating expenses in FY10 and FY11 respectively. Therefore, we believe natural gas price is an essential factor affecting the group's profitability. Although PRC natural gas ex-factory price is primarily government directed while on-grid tariff of gas-fired power plants will generally be adjusted in accordance due to favourable government policies, the possibility of natural gas reform in China will have a large impact on gas-fired power plants. Therefore, we did a sensitivity analysis on a change in natural gas price as well as change in on-grid tariffs.

Assuming other factors are kept constant, we estimate that a +/-5% change in natural gas purchase price will lead to a +/-9.09% change in net profit and a +/-5% change in on-grid tariff of gas-fired power will lead to a +/-8.7% change in net profit. In sum, the group's profit is slightly more sensitive to natural gas purchase price than on-grid tariff of gas-fired power, but less sensitive to the overall change of on-grid tariff of both wind and gas-fired power.

Sensitivity Analysis

| Yr to Dec 31 (Rmb mn) | 2010 | 2011 | 2012F |
|-----------------------------------------------------------------------|-------|-------|----------------|
| Base case (Net profit) | 488.9 | 803.5 | 1,029.7 |
| Case 1: Natural gas price is 5% lower than base case | | | 1,123.3 |
| deviation from base case | | | 9.09% |
| Case 2: Natural gas price is 5% higher than base case | | | 936.1 |
| deviation from base case | | | -9.09% |
| Case 3: On-grid tariff (gas) is 5% lower than base case | | | 940.5 |
| deviation from base case | | | -8.66% |
| Case 4: On-grid tariff (gas) 5% higher than base case | | | 1,119.0 |
| deviation from base case | | | 8.66% |
| Case 5: On-grid tariff (wind) is 5% lower than base case | | | 978.4 |
| deviation from base case | | | -4.98% |
| Case 6: On-grid tariff (wind) 5% higher than base case | | | 1,080.9 |
| deviation from base case | | | 4.98% |
| Case 6: On-grid tariff (wind + gas) is 5% lower than base case | | | 889.2 |
| deviation from base case | | | -13.65% |
| Case 7: On-grid tariff (wind + gas) 5% higher than base case | | | 1,170.2 |
| deviation from base case | | | 13.65% |

Source: ABCI Securities estimates



Sector Comparison

Profitability Comparison

| Ticker | Stock name | Latest FY end | EBIT margin (%) | EBITDA margin (%) | ROAA (%) | ROAE (%) | Net D/E (%) |
|----------------------------------|------------------------------------|------------------|--------------------|----------------------|-------------|-------------|----------------|
| 579 | BJCE | 12/2011 | 38.17 | 57.83 | 3.48 | 10.34 | 134.36 |
| Fossil fuel power | | | | | | | |
| 902 | HUANENG POWER | 12/2011 | 6.58 | 15.51 | 0.49 | 2.26 | 265.81 |
| 991 | DATANG POWER | 12/2011 | 13.90 | 27.18 | 1.29 | 9.02 | 316.71 |
| 836 | CHINA RESOURCES POWER | 12/2011 | 13.24 | 22.30 | 2.86 | 9.93 | 127.47 |
| 1071 | HUADIAN POWER | 12/2011 | 5.82 | 16.11 | 0.05 | 0.32 | 406.37 |
| 2380 | CHINA POWER | 12/2011 | 14.14 | 29.71 | 1.20 | 5.40 | 248.16 |
| | Simple average (excl. 1071) | | 11.97 | 23.68 | 1.46 | 6.65 | - |
| | Max | | 14.14 | 29.71 | 2.86 | 9.93 | - |
| | Min | | 5.82 | 15.51 | 0.05 | 0.32 | - |
| Renewable Energy Power | | | | | | | |
| 916 | CHINA LONGYUAN | 12/2011 | 76.70 | 43.53 | 3.20 | 9.21 | 146.08 |
| 1798 | DATANG RENEWABLE | 12/2011 | 49.90 | 85.44 | 1.53 | 6.56 | 268.42 |
| 958 | HUANENG RENEWABLES | 12/2011 | 52.22 | 88.81 | 4.20 | 12.31 | 174.06 |
| 956 | SUNTIEN GREEN ENERGY | 12/2011 | 33.15 | 11.89 | 2.59 | 5.13 | 50.64 |
| 182 | CHINA WINDPOWER | 12/2011 | 59.35 | 60.89 | 5.76 | 8.87 | 8.42 |
| 735 | CHINA POWER NEW ENERGY | 12/2011 | 18.33 | 36.73 | 1.59 | 3.49 | 87.37 |
| 257 | CHINA EVERBRIGHT INT | 12/2011 | 37.23 | 38.81 | 6.48 | 13.90 | 52.00 |
| | Simple average | | 46.70 | 52.30 | 3.62 | 8.50 | - |
| | Max | | 76.70 | 88.81 | 6.48 | 13.90 | - |
| | Min | | 18.33 | 11.89 | 1.53 | 3.49 | - |
| Utilities play in Beijing | | | | | | | |
| 392 | BEIJING ENTERPRISES HLDGS | 12/2011 | 9.79 | 15.42 | 3.85 | 7.72 | 16.83 |
| 371 | BEIJING ENTERPRISES WATER | 12/2011 | 28.91 | 14.86 | 2.86 | 10.03 | 46.20 |
| | Simple average | | 19.35 | 15.14 | 3.35 | 8.88 | - |

EBITDA margin = Profit before tax, net interest expenses, depreciation and amortization; Net D/E= Net debt/Total equity

Source: The group, Bloomberg, ABCI Securities estimates

The group engaged mainly in natural gas-fired power, wind power and hydro power business. We separate its peers in two categories, namely fossil fuel power peers and renewable energy power peers. Since there is no natural-gas fired power operators listed in HK while natural gas is one kind of fossil fuel, we identify China's five largest coal power plants as its fossil fuel power peers. For its renewable energy power peers, we identify 6 wind power operators and 1 other renewable energy power peer.

Both fossil fuel power generators and the renewable energy power operators have average ROAA of less than 5%, mainly resulting from industry characteristics of huge asset investment. Debt financing is a major financial tool used for capital investment and high debt to equity ratio becomes an industry norm. In turn, the high gearing ratio boosts up ROE.

In FY11, renewable energy power operators generally had a higher profitability than the fossil fuel power generators. In particular, renewable energy power operators had an average ROAA and ROAE of 3.62% and 8.50% respectively, compared to 1.46% and 6.65% of the coal-power generators. With a mixed business of fossil fuel power and renewable energy, the group's ROAA is higher than the fossil fuel power peers but slightly lower than the renewable energy power peer.



Valuation

We appraise the equity of the group in two different approaches. We use comparison method to evaluate the group against the market valuation of comparable peers. We also use the discount cash flow method to value the equity value of the group.

Valuation Summary

| Valuation method | Appraised share value HK\$/share | Appraised share value / Estimated FY12 EPS |
|--------------------|----------------------------------|--------------------------------------------|
| PER rating | 1.77 | 8.60x |
| PB rating | 1.97 | 9.36x |
| Discount cash flow | 2.05 | 9.94x |
| Overall range | 1.77-2.05 | 8.60-9.94x |

Source: ABCI Securities estimates

Market Valuation Comparison

| Ticker | Stock name | Price* HK\$ | Latest FY end | FY2011 PER (x) | Estimate FY2012 PER (x) | Historical P/B (x) Historical |
|----------------------------------|---------------------------|----------------|------------------|-------------------|-------------------------------|-------------------------------------|
| 579 | BJCE | 1.63 | 12/2011 | 9.94 | 7.91 | 0.91 |
| Fossil fuel power | | | | | | |
| 902 | HUANENG POWER | 4.47 | 12/2011 | 10.90 | 9.75 | 0.97 |
| 991 | DATANG POWER | 2.75 | 12/2011 | 9.40 | 7.76 | 0.76 |
| 836 | CHINA RESOURCES POWER | 13.64 | 12/2011 | 9.91 | 8.29 | 1.35 |
| 1071 | HUADIAN POWER | 1.81 | 12/2011 | 8.32 | 6.94 | 0.59 |
| 2380 | CHINA POWER | 1.74 | 12/2011 | 6.47 | 5.64 | 0.54 |
| | Wt. average | | | 9.82 | 8.40 | 0.96 |
| | Max | | | 10.90 | 9.75 | 1.35 |
| | Min | | | 6.47 | 5.64 | 0.54 |
| Renewable Energy Power | | | | | | |
| 916 | CHINA LONGYUAN | 6.45 | 12/2011 | 12.12 | 10.60 | 1.50 |
| 1798 | DATANG RENEWABLE | 1.25 | 12/2011 | 7.07 | 6.22 | 0.83 |
| 958 | HUANENG RENEWABLES | 1.87 | 12/2011 | 7.50 | 6.96 | 1.08 |
| 956 | SUNTIEN GREEN ENERGY | 1.49 | 12/2011 | 6.55 | 5.50 | 0.82 |
| 182 | CHINA WINDPOWER | 0.34 | 12/2011 | 4.52 | 4.07 | 0.57 |
| 735 | CHINA POWER NEW ENERGY | 0.32 | 12/2011 | 5.36 | - | 0.43 |
| 257 | CHINA EVERBRIGHT INT | 3.61 | 12/2011 | 13.44 | 11.47 | 2.09 |
| | Wt. average | | | 10.40 | 8.98 | 1.36 |
| | Max | | | 13.44 | 11.47 | 2.09 |
| | Min | | | 4.52 | 4.07 | 0.43 |
| Utilities play in Beijing | | | | | | |
| 392 | BEIJING ENTERPRISES HLDGS | 0.65 | 12/2011 | 16.89 | 13.83 | 1.45 |
| 371 | BEIJING ENTERPRISES WATER | 0.94 | 12/2011 | 12.63 | 10.63 | 1.44 |
| | Wt. average | | | 16.14 | 13.27 | 1.45 |

*: The share prices were dated on Apr 10, 2012

Source: Bloomberg, ABCI Securities estimates



PER rating method

We see the group as a power generator with a mixed revenue stream from fossil fuel power and renewable energy power. Given their lower ROAA and ROAE, the coal-fired players generally have a lower valuation than the renewable power peers of the group in terms of PER and PB. The coal-fired power plants are trading at 8.40x FY12 PE and 0.96x FY11 PB compared to renewable energy of 8.98x FY12 PE and 1.36x FY11 PB.

Although the group's ROAE exceed both categories on average, we believe ROAA can more truly reflect the asset's profitability. Since the group's ROAA lies within the two categories, we expect its valuation range can be determined by the two categories with the coal-fired peers providing a lower bound and renewable energy peers providing an upper bound. However, the group is now trading at FY12 PE of 7.91x and FY11 PB of 0.91x, which is both below the valuation of coal-fired power. We believe the floor value of the stock should be set at HK\$1.73, based on FY12 PE of 8.40x. Since we estimate BJCE's 66% of revenue will come from fossil-fuel business and 34% from renewable energy in FY12, we set target 12 FY PE at 8.60x and PB at 1.10x. Based on FY12 basic EPS of Rmb0.1674 and FY11 BPS of Rmb1.4558, the targeted PER and PB implies share price of HK\$1.77-1.97 (@HK\$0.8121/Rmb).

Discount cash flow method

We also appraise the group based on the discount cash flow method. We estimate that the group will not generate positive cash flow in 2012 and 2013 but as CAPEX peak in 2013, we expect the group will start generate positive free cash flow in 2014.

| Yr to Dec 31 (Rmbmn) | 2012F | 2013F | 2014F | 2015F | 2016F | 2017F | 2018F | 2019F | 2020F |
|---------------------------------|---------------|---------------|--------|--------|--------|--------|--------|--------|--------|
| EBITDA | 3,052 | 4,165 | 4,831 | 5,604 | 5,968 | 6,356 | 6,769 | 7,209 | 7,678 |
| Chg in WC | -228 | 1,213 | 971 | 777 | 621 | 497 | 398 | 318 | 254 |
| Tax paid | -252 | -387 | -966 | -1,121 | -1,194 | -1,271 | -1,354 | -1,442 | -1,536 |
| Capex | -12,000 | -12,000 | -4,000 | -4,000 | -4,000 | -2,700 | -2,700 | -2,700 | -2,699 |
| Free cash flow | -9,427 | -7,009 | 836 | 1,260 | 1,396 | 2,882 | 3,113 | 3,386 | 3,698 |
| Terminal value | | | | | | | | | 49,046 |
| PV of free cash flow | -8,748 | -6,035 | 668 | 934 | 960 | 1,840 | 1,844 | 1,861 | 3,698 |
| PV of terminal value | | | | | | | | | 26,962 |
| Total PV | 22,042 | | | | | | | | |
| Less: Net debt after tax effect | -11,799 | | | | | | | | |
| PV of equity | 10,244 | | | | | | | | |
| Share value (HK\$) | 2.05 | | | | | | | | |

EBITDA: Pre-tax profit before finance cost, depreciation, amortization, and other non-operating incomes & expenses

Source: ABCI Securities estimates



Our DCF is modeled using the following assumptions:

Major assumptions on WACC

| | |
|---------------------------------------------------|--------|
| WACC | 7.77% |
| Growth (2013-2015) | 15% |
| Growth (2015-2020) | 7% |
| Terminal growth rate | 0% |
| Risk-free rate (10-year HK government bond yield) | 1.19% |
| Hong Kong market return rate | 13.27% |
| Average beta of peers | 1 |
| Debt/asset ratio | 65% |
| Cost of equity | 13.27% |
| Cost of debt | 6% |
| Effective tax rate | 20% |
| WACC | 7.77% |

Source: Bloomberg, ABCI Securities estimates

Taking 12th Five-year plan and China economic growth rate into account, we believe the industry can grow at 15% in 2013-2015 and 7% in 2015-2020. Based on WACC of 7.77%, we value the equity of the group at Rmb10,244mn, or HK\$2.05/share, which is 4.0%-15.8% higher than the share value implied by the targeted PER and PB valuation. Per share value of HK\$2.05 represents FY12 PER of 9.94x and PB of 1.12x.

WACC may change due to interest rate and market return fluctuations. And we estimate WACC of the group may range between 7.0% - 9.0%.

Scenario analysis

| Discount rate | Implied share value | Implied FY12 PER | Implied FY13 PER |
|---------------|---------------------|---------------------|---------------------|
| | HK\$ | | |
| 7.00% | 2.98 | 14.45 | 10.70 |
| 7.50% | 2.35 | 11.40 | 8.44 |
| 7.77% | 2.05 | 9.94 | 7.37 |
| 8.00% | 1.81 | 8.76 | 6.48 |
| 8.50% | 1.33 | 6.45 | 4.78 |
| 9.00% | 0.91 | 4.43 | 3.28 |

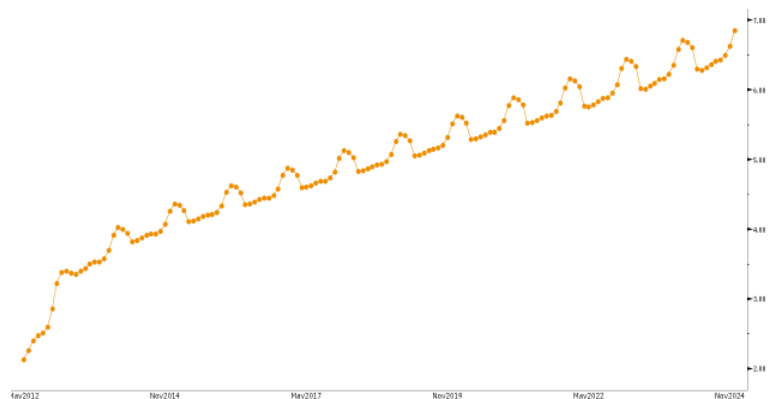
Source: ABCI Securities estimates



Risk Factors

- **Natural gas supply risk:** The group purchased all of the natural gas, which is the major fuel source of the group's gas-fired power and heat plants, from Beijing Gas Group. The operation of the group's gas-fired plants will be affected if the group cannot obtain sufficient of qualified natural gas to satisfy their production requirements. Supply will also be adversely affected due to destroy of the Shaanxi-Beijing Gas Pipeline which transmit gas to Beijing.
- **Geographical concentration risk:** All of the group's gas-fired power and heat energy generation plants were located in Beijing and all of the group's revenue from the related plants was derived from sales in Beijing. Therefore, the gas business of the group is subject to risks specific to the Beijing municipal region, including change in transmission capacity and policy change on industry.
- **Customer concentration risk:** Instead of selling electricity directly to industrial or residential end users, the group sells most of its electricity to local grid companies. The group's electricity sales to local grid companies accounted for 81.8% and 89.8% of the group's total revenue in 2009 and 2010. Any significant non-purchase, non-payment, non-compliance, insolvency or liquidation of the group's grid company customers could affect the group's financial condition.
- **Rising natural gas cost:** Natural gas imports in China increased 69.1% YoY to 9.3mn mt in 2010 and 30.6% YoY to 12.2mn mt in 2011. Although natural gas price is government directed in PRC, we believe that the large amount of imports means that international price will eventually have an impact on domestic price. The natural gas futures curve (NYMEX) shows long term price uptrend in natural gas prices. Income will be negatively affected if the group is unable to pass cost hike to downstream customers.

Natural gas futures



Source: Bloomberg



- **Grid connection risk:** Change in wind resources and a slower than expected grid network development will have a negative impact on the utilization hours of the wind power and the wind power business will be negatively affected.
- **Change in subsidy policy:** The group received Rmb420.5mn and Rmb629.8mn of government grants and subsidies related to clean energy production in FY10 and FY11 respectively, which accounted for 9.9% and 12.9% of their total income and 41.6% and 42.2% of their total EBIT in FY10 and FY11 respectively. In addition, due to a preferential tax treatment, the effective tax rate of the group was as low as 9.8% and 16.4% in FY10 and FY11 respectively compared to a standard EIT rate of 25%. Therefore, any change or discontinue of the subsidy policy could materially affect the group's profitability.
- **Funding needs:** The gas and wind power businesses are both capital intensive business. With a rapid capacity expansion plan, CAPEX is expected to reach Rmb12bn both in 2012 and 2013. The group relied heavily on external financing such as bank borrowings. As at the end of 2011, net debt to equity ratio of the group reached 134.4%. The high gearing deters its ability to raise funds externally or at low cost. The increase in cost of capital will further reduce its already low ROAA and ROAE.



Disclosures

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