



October 13, 2015

Sector Rating:  
**OVERWEIGHT**

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**Key Data**

|                            |       |
|----------------------------|-------|
| Avg.15E P/E (x)            | 15.20 |
| Avg.15E P/B (x)            | 1.19  |
| Avg.15E Dividend Yield (%) | 1.33  |

Source(s): Company, Bloomberg, ABCI Securities

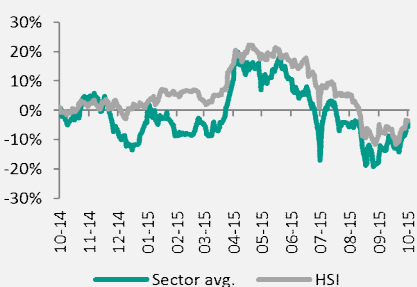
**Sector performance (%)**

|       | Absolute | Relative* |
|-------|----------|-----------|
| 1-mth | 8.52%    | 2.82%     |
| 3-mth | -5.86%   | 3.42%     |
| 6-mth | -18.96%  | -1.44%    |

\*Relative to HSI

Source(s): Bloomberg, ABCI Securities

**1-Year Sector performance**



Source(s):Bloomberg

## China Wind Power Sector Winds of change in China's energy

**Investment themes**

- ❖ China is highly dependent on traditional energy, but increasing diseases caused by air pollution and rising concern over air quality make the shift from traditional to renewable energy inevitable
- ❖ China set to boost wind power capacity by 13% CAGR during 2014-20 and lift wind power output by 16% CAGR during 2014-20. This should provide great opportunities for wind power operators
- ❖ We initiate coverage on Longyuan (916 HK, BUY) with a **BUY** rating and also favor Huaneng Renewables (958 HK, BUY). For Datang Renewable (1798 HK, HOLD), we recommend **HOLD**

**China is highly dependent on traditional energy.** According to the National Energy Administration (NEA) data, nearly 70% of China's primary energy comes from fossil fuel (e.g. coal, oil, natural gas etc.). For power generation, more than 70% of electricity is coal-fired, suggesting that China is highly dependent on fossil fuel energy. In other developed countries, traditional coal energy accounts for only 30% of the total primary energy consumption on average. This indicates China would need to boost the use of alternative energy.

**Air pollution problem is a pressing issue.** According to China Institute of Atmospheric Physics data, incidence of China's lung cancer has been maintaining an uptrend correlating closely to aerosol (AEC) emission rate (aerosol is a composite of PM2.5). Research studies have shown that AEC exposure has become another critical reason for lung cancer other than smoking. Increasing incidence of lung cancer would increase the government's public health expenditure and may trigger social panic. China would need to tackle the issue of air pollution in the near future. The country will shift to renewable energy which target to boost wind power output at 16% CAGR during 2014-20.

**The Chinese government opts for a cleaner and more sustainable energy structure.** The National Energy Administration (NEA) issued the 12th Five-Year Plan for wind energy in 2012, stating that China is targeting to have 200GW of installed wind power capacity by end-2020. This would imply a 109% increase from 96GW by end-2014, or a 13% CAGR over 2014-20. China also targets to attain a power output of 390 bn kWh in 2020, a 143% increment from the 161bn kWh in 2014, indicating a 16% CAGR during 2014-2020. We believe the rapid expansion of output nationwide should drive earnings growth for wind power operators.

**Overweight sector outlook- BUY Longyuan and Huaneng.** We are positive on the outlook of the wind power sector. China Longyuan (916 HK, BUY) is our top pick because of its lowest all-in capacity cost and well-diversified prime wind power assets. We also like Huaneng Renewables (958 HK, BUY) as its robust growth in capacity would boost future earnings. Datang Renewable (1798 HK, HOLD) is our least preferred stock as its high all-in capacity cost and net gearing ratio may hinder its future capacity growth and increase fundraising need.

**Risk factors:** (1) High gearing of power players; (2) Natural resources risks; (3) Grid connection risks; (4) Policy risks; (5) Economic slowdown.

**Sector Valuation Summary (data as of Oct 12, 2015)**

| Company            | Ticker  | Rating | Price (HK\$) | TP (HK\$) | FY15E P/E(x) | FY16E P/E (x) | FY15E P/B (x) | FY16E P/B (x) | FY15E Yield (%) | FY16E Yield (%) |
|--------------------|---------|--------|--------------|-----------|--------------|---------------|---------------|---------------|-----------------|-----------------|
| China Longyuan     | 916 HK  | Buy    | 8.75         | 10.80     | 15.21        | 13.10         | 1.60          | 1.46          | 1.31            | 1.53            |
| Huaneng Renewables | 958 HK  | Buy    | 3.07         | 3.70      | 13.55        | 11.58         | 1.37          | 1.22          | 1.48            | 1.73            |
| Datang Renewable   | 1798 HK | Hold   | 1.07         | 1.15      | 16.86        | 30.10         | 0.60          | 0.59          | 1.19            | 0.66            |

Source(s): Companies, ABCI Securities estimates



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## Investment summary

### China is highly dependent on traditional energy

According to the National Energy Administration (NEA) data, nearly 70% of China's primary energy comes from fossil fuel (e.g. coal, oil, natural gas etc.). For power generation, more than 70% of electricity is coal-fired, suggesting that China is highly dependent on fossil fuel energy. In other developed countries, traditional coal energy accounts for only 30% of the total primary energy consumption on average. This indicates China would need to boost the use of alternative energy.

### Coal-fire power generation is one of the key sources of PM2.5

PM2.5, also known as particulate matter (PM) or particulates, is one of the leading causes of lung diseases and smog weather. In China, coal-fire power generation, soil dust (mainly from construction), and industrial pollution are the three major sources of PM2.5. We believe reducing dependence on fossil fuel energy will lessen PM2.5 emission.

### Air pollution problem is a pressing issue

According to China Institute of Atmospheric Physics data, incidence of China's lung cancer has been maintaining an uptrend correlating closely to aerosol (AEC) emission rate (aerosol is a composite of PM2.5). Research studies have shown that AEC exposure has become another critical reason for lung cancer other than smoking. Increasing incidence of lung cancer would increase the government's public health expenditure and may trigger social panic. China government would need to tackle the issue of air pollution in the near future.

### China targets to boost wind power output at 16% CAGR during 2014-20E; wind power operators are key beneficiaries

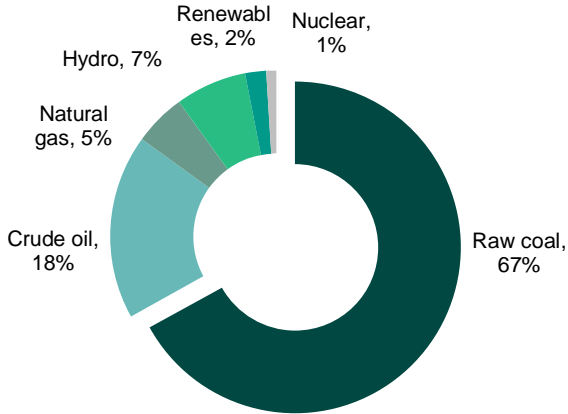
The Chinese government opts for a cleaner and more sustainable energy structure. The National Energy Administration (NEA) issued the 12<sup>th</sup> Five-Year Plan for wind energy in 2012, stating that China is targeting to have 200GW of installed wind power capacity by end-2020. This would imply a 109% increase from 96GW at end-2014, or a 13% CAGR over 2014-20. China also targets to attain a power output of 390 bn kWh in 2020, a 143% increment from the 161 bn kWh in 2014, indicating a 16% CAGR during 2014-2020. We believe the rapid expansion of output nationwide should drive earnings growth for wind power operators.

### Stock recommendation

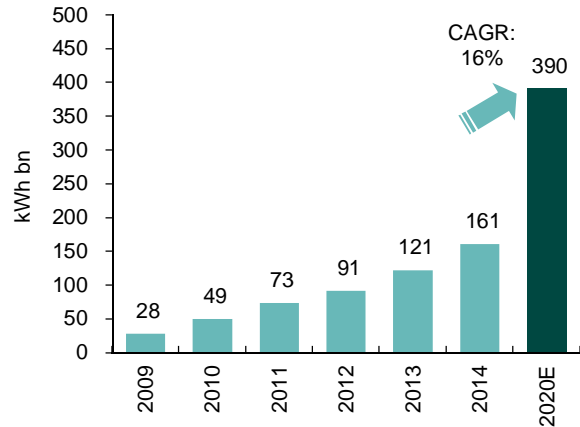
We favor China Longyuan (916 HK) the most due to its lowest all-in capacity cost and well-diversified prime wind power asset that should help maintain its leading position in China. Datang Renewable is our least preferred counter as its high all-in capacity cost and net gearing may hinder its future capacity growth and prompt fundraising concern.

- ◆ **China Longyuan (916, BUY).** Our top pick in wind power coverage universe (916 HK; 958 HK; 1798 HK). We like Longyuan due to 1) Lowest unit all-in capacity cost and net gearing should help boost future capacity growth; 2) Well-diversified prime wind power asset should help reduce curtailment risk.
- ◆ **Huaneng Renewables (958 HK, BUY).** We believe Huaneng will be the fastest-growing wind power play in China because it is firmly backed by its parent company, Huaneng Group, and its aggressive expansion plan. Its capacity, which grew at 37% CAGR in 2009-14; should continue to increase at mid-teen level annually.

- ◆ **Datang Renewable (1798 HK, HOLD).** As the wind energy industry develops in China, Datang should show the largest improvement due to its thin net margins and low capacity base. However, its high net gearing and unit all-in capacity cost may hinder its future capacity growth.

**Exhibit 1: China's energy structure is highly dependent on traditional energy**


Source(s): NEA, ABCI Securities

**Exhibit 2: China's shift to renewable energy means that wind power output should surge**


Source(s): NEA, ABCI Securities

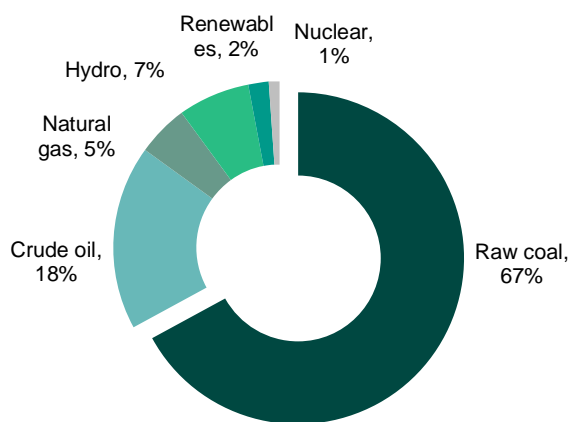


## Background– The switch from traditional to renewable energy in China

### China is highly dependent on traditional energy

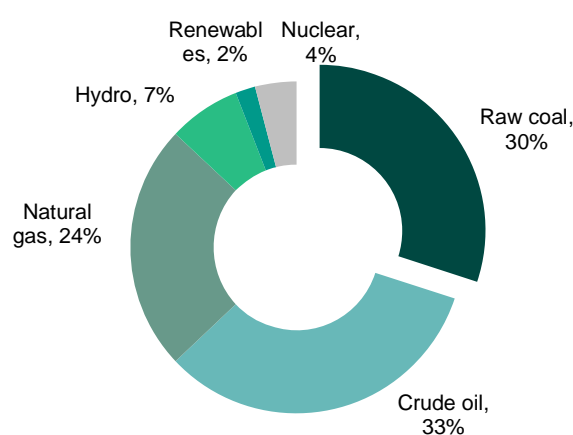
According to data from the National Energy Administration (NEA), nearly 70% of China’s primary energy comes from fossil fuel (e.g. coal, oil, natural gas etc.). For power generation, more than 70% electricity is coal-fired, suggesting that China is highly dependent on fossil fuel energy. In developed countries, traditional coal energy accounts for only 30% of the total primary energy consumption on average; for power generation, coal-fire only account for 30% of the total output on average, indicating China has much room to increase its use of alternative energy.

Exhibit 3: China’s primary energy consumption structure (2013)



Source(s): NEA, ABCI Securities

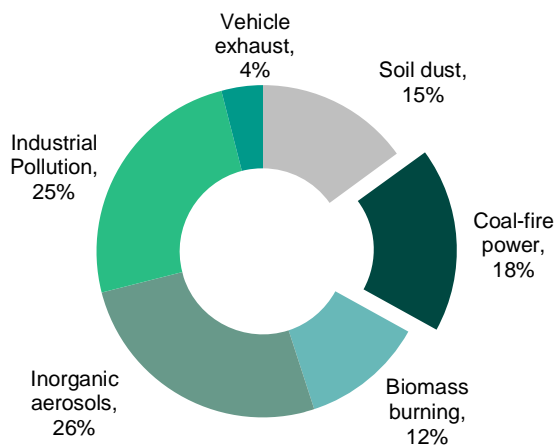
Exhibit 4: Global primary energy consumption structure (2013)



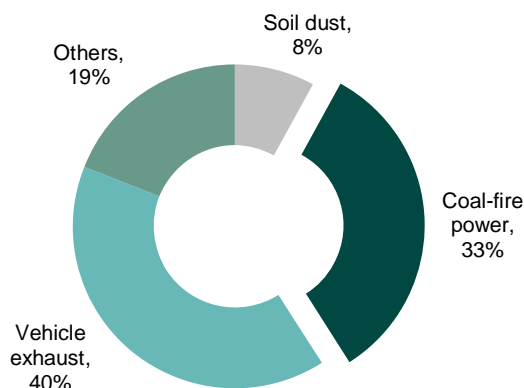
Source(s): NEA, ABCI Securities

### Coal-fire power generation is one of the key sources of PM2.5

PM2.5, also known as particulate matter (PM) or particulates, is microscopic solid or liquid matter suspended in the Earth’s atmosphere with a diameter of 2.5 micrometers or less. It is a key source of lung diseases and smog weather. In China, coal-fire power generation, soil dust (mainly cause by construction) and industrial pollution are the three major sources of PM2.5. However, coal-fire power generation can be seen as the common source of PM2.5 in China. According to China News data, in 2013, 18% of Beijing’s PM2.5 originated from coal-fire power generation. The same figure was 33% in Hangzhou. We therefore believe reducing dependence on fossil fuel energy is an effective way in lessening PM2.5 emission.

**Exhibit 5: Major sources of PM2.5 in Beijing (2013)**


Source(s): ChinaNews

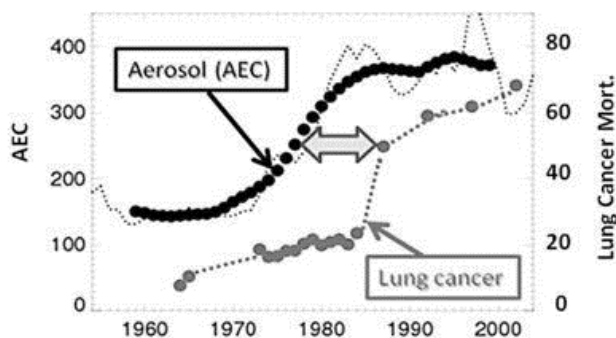
**Exhibit 6: Major sources of PM2.5 in Hangzhou (2013)**


Source(s): Qianjiang Evening News

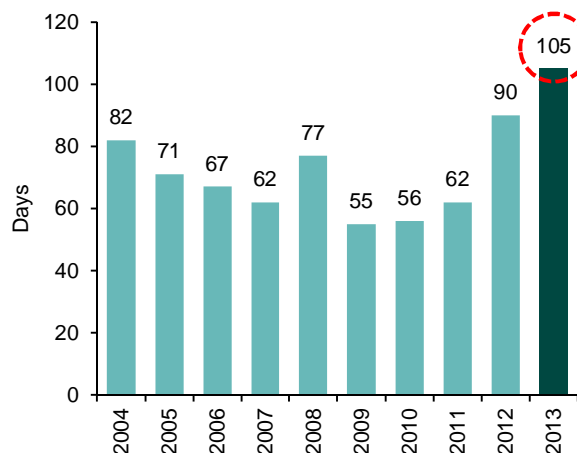
### Air pollution problem is a pressing issue

Public concern over air pollution has been increasing in recent years. It is becoming a critical issue in public health and social stability. According to China Institute of Atmospheric Physics data, incidence of lung cancer in China has been maintaining an uptrend highly correlated to aerosol (AEC) emission (Aerosol is composite of PM2.5). Research studies have shown that AEC exposure has become another major reason for lung cancer other than smoking. Increasing lung cancer would increase the government's public health expenditure and trigger social unrest.

In addition, increasing population and vehicles in urban areas have increased the number of smog days in major cities, posing threat to social health. According to data from The Beijing News, the number of smog days in the city has been trending up. In 2013, a total of 105 smog days was recorded. Hence, China would need to take action to reduce air pollution issue in the near future.

**Exhibit 7: The correlation between lung cancer and air pollution in China**


Source(s): China Institute of Atmospheric Physics, ABCI Securities

**Exhibit 8: The number of smog days is increasing in Beijing**


Source(s): The Beijing News, ABCI Securities



## The nature of wind power

### Wind energy is more effective than solar energy in China

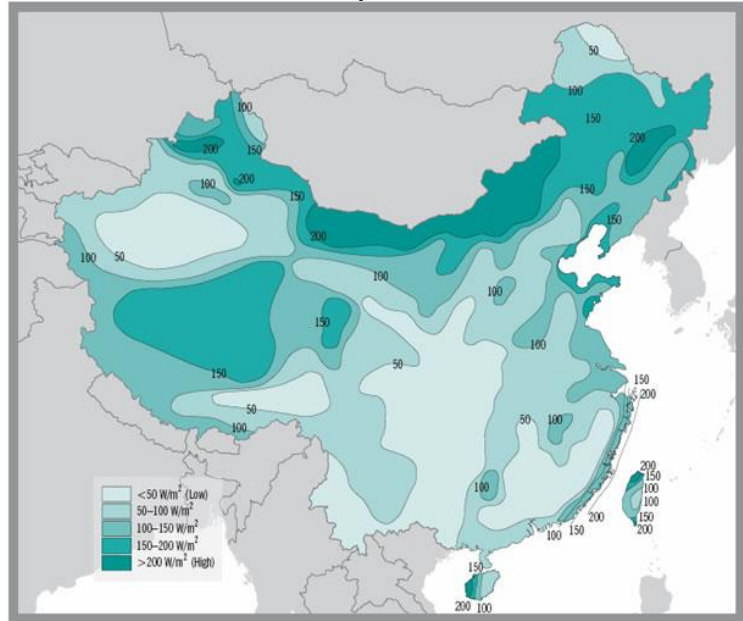
There has been controversies regarding if solar or wind energy is a better form of renewable energy to be used in China. We prefer wind over the solar energy because 1) average utilization hour of solar energy generation is only eight hours per day whereas wind power can be generated around the clock; 2) Solar energy requires more land, which will likely take up the limited land resources for farming.

- ◆ **Higher utilization rate:** Average sun hour in China is only around eight hours a day, suggesting the solar utilization rate is around 30%, which is much lower than that of wind power (almost 24 hours). Furthermore, more than 60% of China's surface area is located in the northern hemisphere, meaning that the sun hour is even shorter in winter.
- ◆ **Greater efficiency:** In general, wind turbines can capture nearly 60% of the wind energy generated by air movement, while solar photovoltaic panels can only capture ~20% of solar energy passing through the atmosphere. This is the major difference between the efficiency of wind and solar power.
- ◆ **Higher stability:** Solar energy output can be affected by the cloud and rainy days, but wind sources are dependent on change in atmospheric pressure, which is relatively constant throughout the year even in bad weather.
- ◆ **Land use:** All types of solar energy (photovoltaic panel or concentrated solar power) need to occupy a certain amount of land surface, which is likely to affect farming and other activities.
- ◆ **Cost advantages:** Wind turbines are cheaper than solar equipment. According to various studies on the wind industry, average equipment cost of wind turbines is ~RMB 4/W, yet equipment cost for solar photovoltaic is ~RMB 5/W.

### Wind power resources in China— imbalance between location and demand

According to the China Wind Energy Association, China's wind resources are mainly located in Inner Mongolia, northeastern regions and Tibet. Some coastal provinces, like Shandong and Fujian, are also rich in wind resources. However, major demand for wind power is located in coastal provinces, meaning that a strong cross-regional transmission power grid system is required to fully utilize wind power resources.

**Exhibit 9: China wind resource map**



Source(s): inquisitr.com

**Exhibit 10: On-shore wind turbines**



Source(s): pansci.asia

**Exhibit 11: Off-shore wind turbines**



Source(s): stock.sohu.com

**Exhibit 12: Solar Photovoltaic panel**



Source(s): china5e

**Exhibit 13: Concentrated solar power**



Source(s): fixy.com.tw





## Key positives

### China targets to expand wind power output by 16% CAGR during 2014-20E

Due to heavy dependence on fossil energy (coal-fire power accounted for ~70% of total output in 2014), and rising concerns regarding pollution, the Chinese government is opting for a cleaner and more sustainable energy structure. The National Energy Administration (NEA) issued the 12<sup>th</sup> Five-Year Plan for wind energy in 2012, which states that China targets to reach 200GW of installed wind power capacity by end-2020. This implies a 109% increase from the 96GW by end-2014, or a 13% CAGR in 2014-2020. Furthermore, in the 12<sup>th</sup> Five-Year Plan for wind power, China targets to reach 390bn of kWh power output in 2020, a 143% increment from 161bn kWh in 2014 or 16% CAGR in 2014-2020. We believe the rapid expansion of output nationwide should accelerate earnings growth for the wind power operators.

### Decreasing production unit cost is another plus to promoting the use of wind power

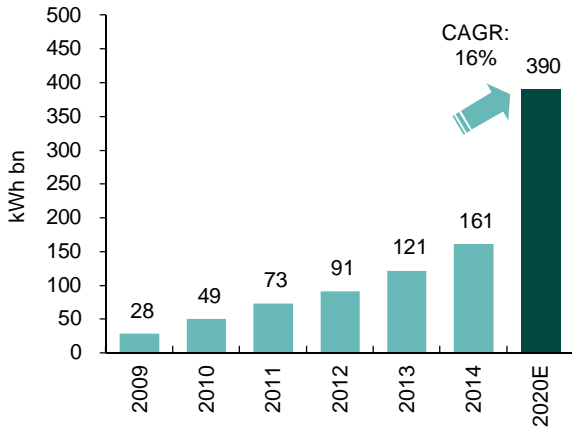
Due to technological advancement, the unit cost of wind power equipment has been decreasing for years, which in turn helps reduce wind power production cost. This supports the promotion of wind power nationwide, benefiting wind power operators. According to industry data, China's wind power equipment unit cost declined by 26% from RMB5.8/W at end-2008 to RMB4.3/W at end-2014, indicating a negative CAGR of 7.2% during the period.

### Policy relaxation facilitates capacity expansion

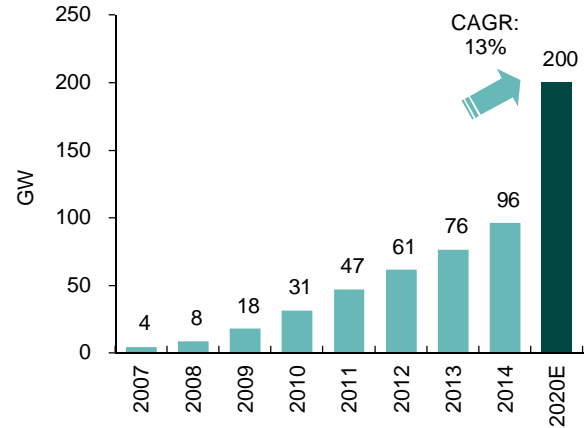
The Chinese government has been easing the current regulations on wind power investment to accelerate wind capacity expansion. The State Council issued a statement on May 16, 2013, enabling the local governments, instead of the NDRC, to approve wind power investment. Currently, any investment in wind power capacity greater than 50 MW would still need to be approved by the NDRC- a factor we believe to have hindered the pace of wind power development. Given capacity growth is a key driver for wind power operators' earnings growth, further policy easing should be a significant positive catalyst.

### Improving grid capacity is a long-term trend; wind power curtailment to reduce

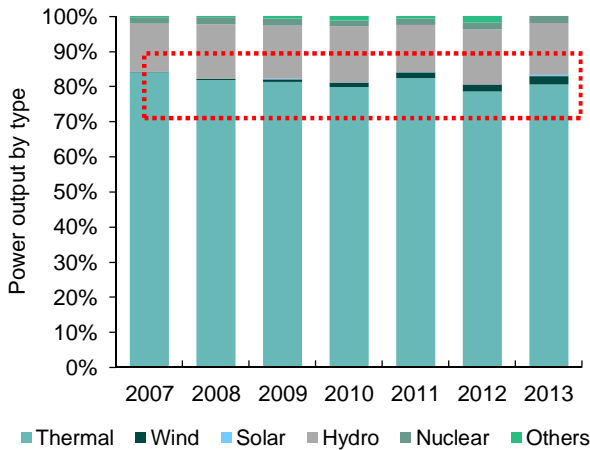
China's State Electricity Regulatory Commission issued a wind power curtailment report in July 2012 and has urged the State Grid to improve grid capability. As Ultra-High-Voltage (UHV) transmission networks are currently under construction, we believe the issue of wind power curtailment will be resolved. Furthermore, current wind power output only accounts for 2% of existing power output, suggesting that wind power curtailment should not be a long-term problem to China's overall power transmission system.

**Exhibit 14: China's wind power output is set to grow robustly in the coming years**


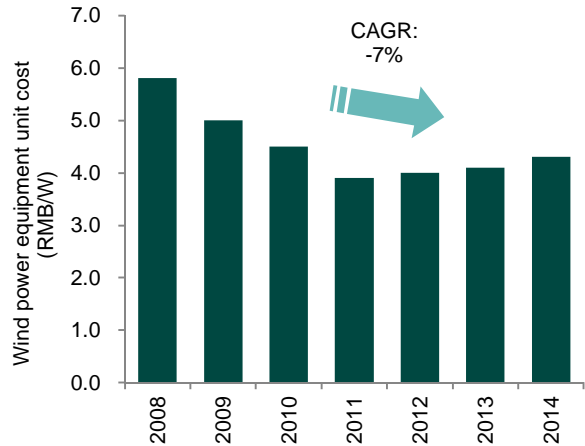
Source(s): NEA, ABCI Securities

**Exhibit 15: China's wind capacity should maintain a rapid growth in 2014-2020**


Source(s): NEA, ABCI Securities

**Exhibit 16: China's power output structure indicates much growing room for renewable energy**


Source(s): NEA, ABCI Securities

**Exhibit 17: China's wind power equipment unit cost has been trending down**


Source(s): bjx.com, NEA



## Overhangs of wind power industry

### Potential wind power tariff cut

China's wind power tariff is based on the coal-fire power tariff and certain subsidies. In addition to the current weakening coal prices, China is seeking to lower the burden of companies to support industrial production, and this should exert pressure on nationwide coal-fire power tariff and wind power tariff. China's National Development and Reform Commission (NDRC) has revised down coal-fire on-grid tariffs by RMB 0.01/kWh (or 2%) in Oct 2013 and Nov 2009 as coal prices decline. As a result, the nationwide wind power tariff was revised down by RMB 0.02/kWh (or 4%) in Feb 2015. We would not be surprised to see another coal-fire power tariff cut in the near term as regional coal prices have declined by 24% YTD, and this should negatively impact the wind power tariff as it is based on the coal-fire tariff.

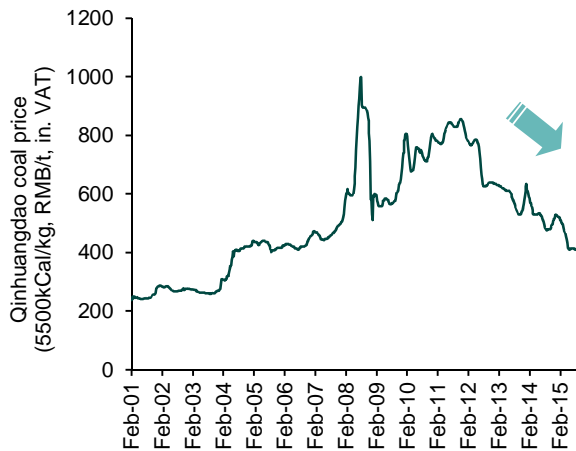
In the long run, we believe China would target to lower wind power tariff in order to compete with coal-fire power on cost, which could encourage more users to switch to renewable energy. A persisting downtrend in wind power tariff, however, may reduce investment in wind power.

### Wind power curtailment may lower utilization hour

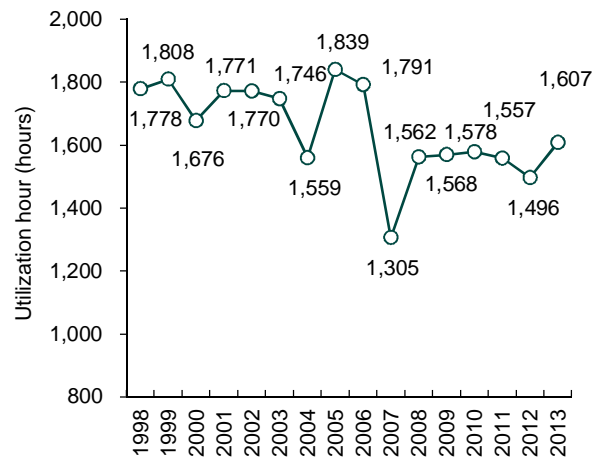
According to the China Wind Power Association, the wind power curtailment in Inner Mongolia and northeast China is mainly due to bottlenecks in the cross-regional transmission network that fails to transmit wind power to coastal regions with high demands. As the construction period of the power grid usually last three to five years, which is much longer than the wind turbines that take six months to one year to complete, a certain amount of wind power was wasted. In 2013, 16 bn kWh wind power was wasted due to the transmission network bottleneck, which accounted for 13% of total nationwide wind power output. According to the CEIC data, China's nationwide average utilization hour decreased by 10% to 1,607 hours in 2013 from 1,778hour in 1998, and we believe the reduction was a result of the power curtailment.

### Decreased power demand may slow wind power development

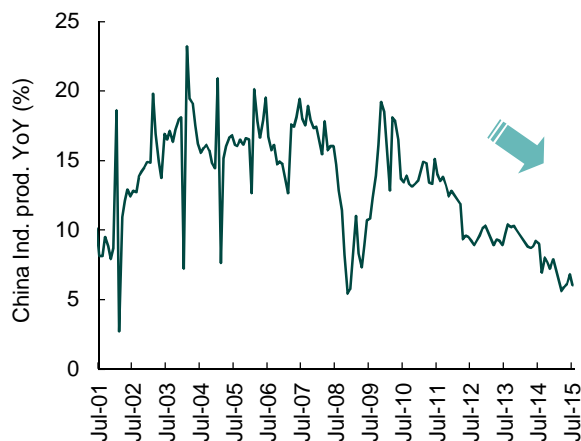
Fragile industrial production activities are likely to reduce China's total power demand and therefore may decelerate development of the wind power industry. According to the CEIC data, China's industrial production growth decreased from 19.2% in November 2009 to 6% in July 2015. At the same time, China's total power output growth has been trending down, falling from the 13.9% YoY growth in July 2010 to the current decline of 1.2%YoY in July 2015.

**Exhibit 18: Decreasing coal prices may trigger wind power tariff cut in China**


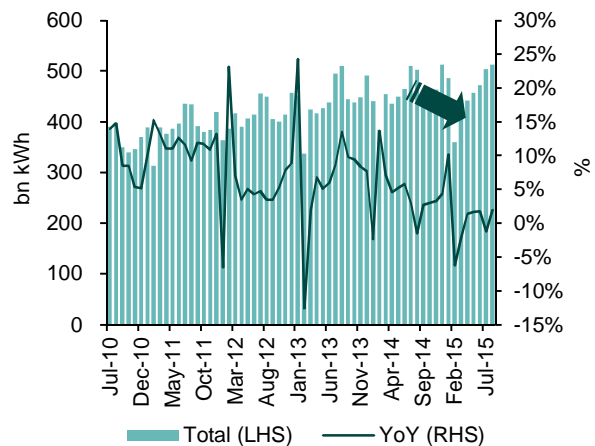
Source(s): cqcoal, ABCI Securities

**Exhibit 19: China's nationwide average utilization hour remains low compared to previous years**


Source(s): CEIC, ABCI Securities

**Exhibit 20: Sluggish activities in industrial production reduce overall power demand**


Source(s): CEIC

**Exhibit 21: China's total power consumption has been trending down**


Source(s): NEA, ABCI Securities

## Stock recommendations

We favor Longyuan power the most among peers because of 1) its well-diversified wind power assets that help reduce negative impacts resulting from wind power curtailment; 2) Its unit all-in capacity cost, which is the lowest among peers, suggests the Group will be able to boost capacity growth with less financial resources; 3) Its lowest net gearing ratio among peers implies lower fundraising need.

We believe Huaneng Renewables could benefit from strong capacity growth in the near future due to its low base. According to the information released during the 1H15 analyst meeting, Huaneng targets to add 2GW of new capacity in 2015E, which represents a 27%YoY growth in capacity and this should help boost its annual net income by 70%YoY based on our estimates.

For Datang Renewable, its low capacity base and thin operation margin should provide the largest room for earnings rally as development of wind energy accelerates in the country. However, its high net gearing (1H15: 342%) may restrict its future capacity growth and increase the necessity of fundraising activities. Its high unit all-in capacity cost also means that its capacity will likely achieve a single-digit growth in the long term.

### **Lower net gearing ratio should provide stronger potential growth for players**

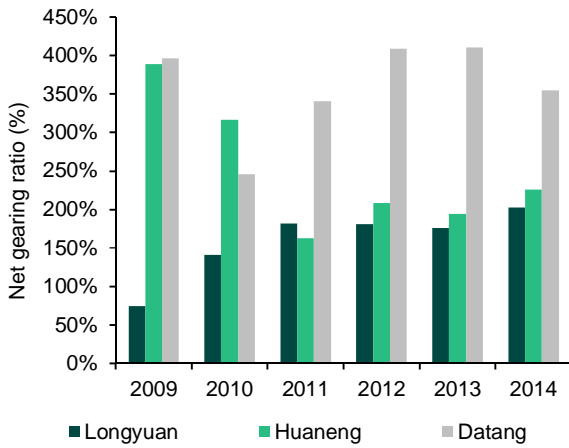
A lower net gearing ratio indicates stronger financial capability in terms of funding new projects, making it easier for company to boost capacity growth. Most wind power operators will likely raise funds for capex, with ~80% of the capex coming from bank loans or other sources. Operators with a lower gearing ratio would be more able to construct facilities at locations with better wind resources and see stronger capacity growth. Longyuan had the lowest net gearing ratio of 203% as of Dec 2014, compared to Huaneng's 226% and Datang's 354%.

### **Higher utilization hour is the key**

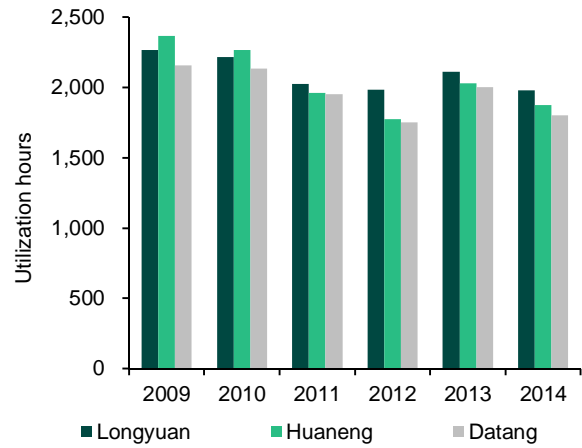
Given the power grid bottleneck, net power generation in China is still largely influenced by the utilization hour instead of being solely dependent on installed capacity growth. According to State Electricity Regulatory Commission, wind power curtailment in northern China is more serious than southern and coastal regions mainly due to weak local demand and poor cross-regional transmission. With a diversified regional mix, Longyuan's utilization hour reached 1,980 hours in 2014, the highest among peers, as compared to Huaneng's 1,875 hours and Datang's 1,803 hours in 2014. To note, 42% of Datang's existing capacity is located in Inner Mongolia and therefore its utilization hour was suppressed due to curtailment.

### **Interest costs**

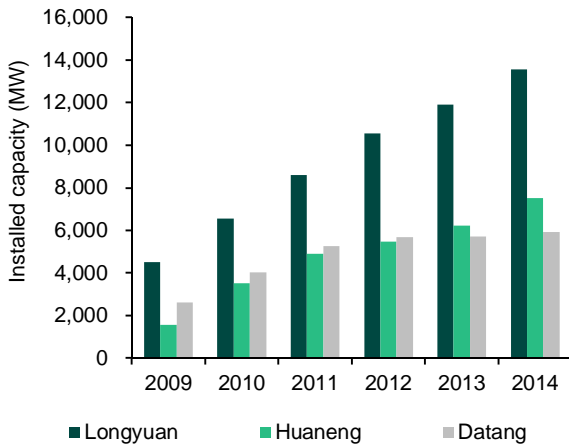
As the wind power business is capital-intensive, most operators have a high gearing ratio and hence a high interest rate in financing. As of Dec 2014, Longyuan's effective interest rate was the lowest at 5.4%, compared to Datang's 5.8% and Huaneng's 6.5%.

**Exhibit 22: Net gearing ratio comparison**


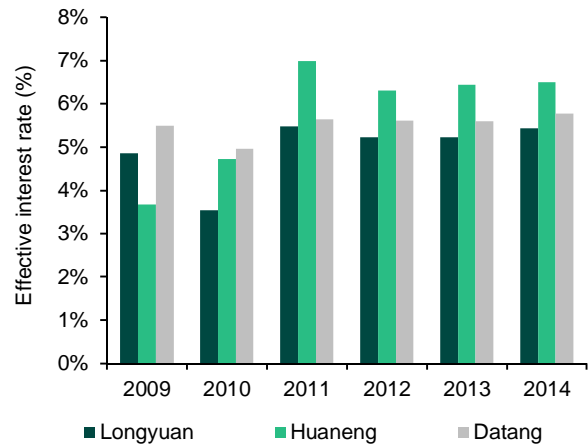
Source(s): Company data, ABCI Securities

**Exhibit 23: Utilization hour comparison**


Source(s): Company data, ABCI Securities

**Exhibit 24: Installed wind power capacity comparison**


Source(s): Company data, ABCI Securities

**Exhibit 25: Effective interest rate comparison**


Source(s): Company data, ABCI Securities



October 13, 2015  
Company Report  
Rating: BUY  
TP: HK\$ 10.80

|                         |        |
|-------------------------|--------|
| H-Share price (HK\$)    | 8.75   |
| Est. share price return | 23.43% |
| Est. dividend yield     | 1.31%  |
| Est. total return       | 24.74% |

Analyst: Kelvin Ng  
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Email: kelvinng@abci.com.hk

**Key Data**

|                                     |            |
|-------------------------------------|------------|
| Market share (HK\$ mn)              | 70,318     |
| 3-mth avg. daily turnover (HK\$ mn) | 118        |
| 52-week high/low (HK\$)             | 11.36/7.12 |
| Issued shares (mn)                  | 8,036      |
| Major shareholder(s) (%):           |            |
| Guodian Corp                        | 57.3       |

Source(s): Company, Bloomberg, ABCI Securities

**FY14 Revenue breakdown (%)**

|                 |      |
|-----------------|------|
| Wind power      | 61.1 |
| Coal-fire power | 33.8 |
| Others          | 5.1  |

Source(s): Company, ABCI Securities

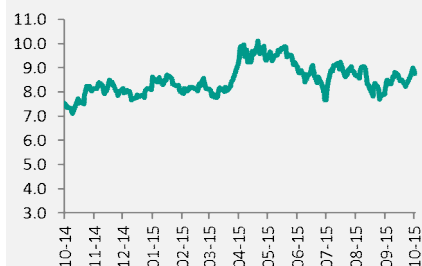
**Share performance (%)**

|       | Absolute | Relative* |
|-------|----------|-----------|
| 1-mth | 4.92%    | -0.79%    |
| 3-mth | -1.24%   | 8.04%     |
| 6-mth | -7.53%   | 9.99%     |

\*Relative to HSI

Source(s): Bloomberg, ABCI Securities

**1-Year stock performance**



Source(s): Bloomberg, ABCI Securities

Longyuan Power (916 HK)  
Market leader with prime assets

- Lowest unit all-in capacity cost among peers should help Longyuan to achieve 16%/14% YoY capacity growth in 2015E/16E
- Well-diversified wind power assets should provide strong support to utilization hour and reduce power curtailment risk
- Lowest net gearing among peers should help Longyuan to boost future capacity growth with less financial burden
- We initiate coverage on Longyuan with a BUY rating. Based on our DCF model with a WACC of 9%, we set our TP at HK\$10.80, which represents 19x/16x 2015E/16E P/E and 2.0x/1.8x 2015E/16E P/B

**Wind capacity to grow 16%/14% YoY in 2015E/16E with the lowest unit all-in cost among peers.** Longyuan has the lowest unit all-in cost for wind power capacity among peers that enables the Group to expand its capacity with less capital. Longyuan recorded an all-in capacity cost of RMB 8/W in 1H15, 33% lower than the peer average of RMB 12W during the period. We expect Longyuan to secure a mid-teen capacity growth rate in the long term, with installed capacity expanding by 16%/14% YoY in 2015E/16E. Hence, earnings should increase by 49%/16% YoY in 2015E/16E.

**Diversified wind power assets to provide strong support to utilization hour.** The Group recorded the highest utilization hour among wind operators at 1,980 hours, down 6% YoY. With the Group's wind power facilities being diversified geographically, it has been able to minimize the negative impact from wind power curtailment in northern China, which is especially important as the issue is likely to persist in the near term and Longyuan's assets at prime locations should limit the impact.

**Lowest gearing ratio among peers to boost future capacity growth.** Wind power industry is capital-intensive and initial investment is critical for future growth. Due to Longyuan's competitive portfolio and leading position in the industry, the Group has the lowest gearing ratio among wind operators in our coverage universe. The low gearing suggests a higher potential for capacity expansion, and the lower financial burden would also reduce its sensitivity to interest rate fluctuations. A healthy balance sheet also implies a lower financing cost for new loans.

**Initiate BUY with TP at HK\$ 10.80.** Based on our DCF model with a WACC of 9%, we set our TP at HK\$10.80, equivalent to 19x/16x FY15E/16E P/E and 2.0x/1.8x FY15E/16E P/B. With Longyuan's robust capacity growth and well-diversified prime assets, the counter is our top-pick in the wind energy sector.

**Risks:** (1) Slower-than-expected capacity growth; (2) Tariff cut; (3) Surge in maintenance costs (4) Policy risks.

**Results and Valuation**

| FY ended Dec 31     | 2013A  | 2014A  | 2015E  | 2016E  | 2017E  |
|---------------------|--------|--------|--------|--------|--------|
| Revenue (RMB mn)    | 19,147 | 18,207 | 21,654 | 23,771 | 26,491 |
| Chg (% YoY)         | 10.7   | -4.9   | 18.9   | 9.8    | 11.4   |
| Net Income (RMB mn) | 2,052  | 2,558  | 3,805  | 4,419  | 5,255  |
| Chg (% YoY)         | -20.9  | 24.7   | 48.7   | 16.2   | 18.9   |
| EBITDA (RMB mn)     | 10,471 | 12,013 | 15,109 | 16,861 | 19,030 |
| Chg (% YoY)         | 6.0    | 14.7   | 25.8   | 11.6   | 12.9   |
| EPS (RMB)           | 0.255  | 0.318  | 0.473  | 0.550  | 0.654  |
| Chg (% YoY)         | -26.4  | 24.8   | 48.7   | 16.2   | 18.9   |
| BVPS (RMB)          | 3.852  | 4.113  | 4.504  | 4.944  | 5.467  |
| Chg (% YoY)         | -2.1   | 6.8    | 9.5    | 9.8    | 10.6   |
| P/E (x)             | 28.25  | 22.63  | 15.21  | 13.10  | 11.02  |
| P/B (x)             | 1.87   | 1.75   | 1.60   | 1.46   | 1.32   |
| ROE (%)             | 6.63   | 7.74   | 10.51  | 11.12  | 11.96  |
| ROA (%)             | 1.85   | 2.07   | 2.77   | 2.99   | 3.26   |
| DPS (RMB)           | 0.047  | 0.060  | 0.095  | 0.110  | 0.131  |
| Yield (%)           | 0.66   | 0.83   | 1.31   | 1.53   | 1.82   |
| Net gearing* (%)    | 175.9  | 202.7  | 195.3  | 187.9  | 179.6  |

\*Net gearing=Net debt/Total equity

Source(s): Bloomberg, ABCI Securities estimates

## Key positives

### Wind capacity to grow 16%/14%YoY in 2015E/16E with the lowest unit all-in cost among peers.

Longyuan has the lowest unit all-in cost for wind power capacity among peers that enables the Group to expand its capacity with less capital. Longyuan recorded an all-in capacity cost of RMB 8/W in 1H15, 33% lower than the peer average of RMB 12W during the period. We expect Longyuan to secure a mid-teen capacity growth rate in the long term, with installed capacity expanding by 16%/14%YoY in 2015E/16E. Hence, earnings should increase by 49%/16%YoY in 2015E/16E.

### Market leader position to benefit from supportive policies

Longyuan is the largest wind power generator in China with 13,543 MW of installed wind power capacity in 2014, equivalent to 14% of total China's total wind power capacity. Its wind power output reached 23,088 GWh in 2014, which contributed to 14% of national wind power generation, the highest in China. Its leading position means the Group is likely to benefit from relevant favorable policies and accelerating growth in China's wind power generation.

### Diversified wind power assets to support utilization hour

The Group recorded the highest utilization hour among wind operators at 1,980 hours, down 6% YoY, compared to 1,875 hours in Huaneng Renewables (958 HK) and 1,803 hours in Datang Renewable (1798 HK). With the Group's wind power facilities being diversified geographically, it has been able to minimize the negative impact from wind power curtailment in northern China, which is especially important as the issue is likely to persist in the near term and Longyuan's assets at prime locations should limit the impact.

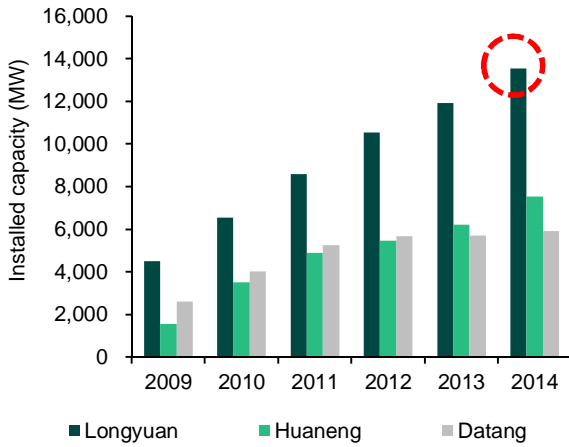
### Lowest gearing ratio among peers is positive for future capacity growth

Wind power industry is capital-intensive and initial investment is critical for future growth. Due to Longyuan's competitive portfolio and leading position in the industry, the Group has the lowest gearing ratio among wind operators in our coverage universe. At the end of 2014, its net gearing ratio was 203%, much lower than the 226%, in Huaneng Renewables (958 HK) and 354% in Datang Renewable (1798 HK). The low gearing suggests a higher potential for capacity expansion, and the lower financial burden would also reduce its sensitivity to interest rate fluctuations. A healthy balance sheet also implies a lower financing cost for new loans.

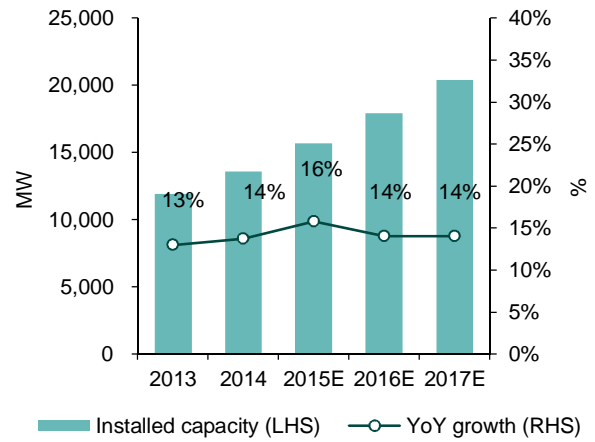
### Weakening coal price may benefit Longyuan's coal-fire business

Unlike other pure wind power operators, 18% of Longyuan's revenue was from its coal-fire power generation business in 2014. The falling coal price at present is likely to improve the gross margin of this segment; the Qinhuangdao 5500 kCal/kg coal price slid 16% YoY in 1H15 and average price 22% YoY YTD, suggesting Longyuan's coal-fire business would further improve in 2015.

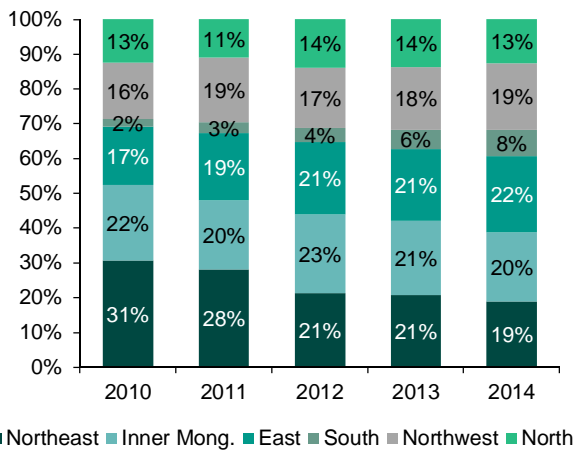


**Exhibit 1 : Longyuan has the largest installed wind power capacity in China**


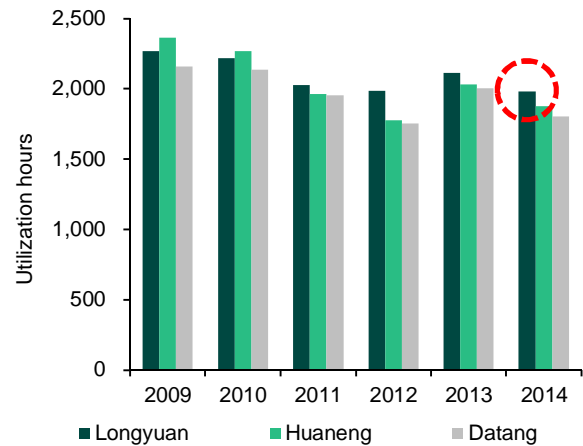
Source(s): Company data, ABCI Securities

**Exhibit 2: Longyuan is likely to maintain a mid-teen capacity growth rate going forward**


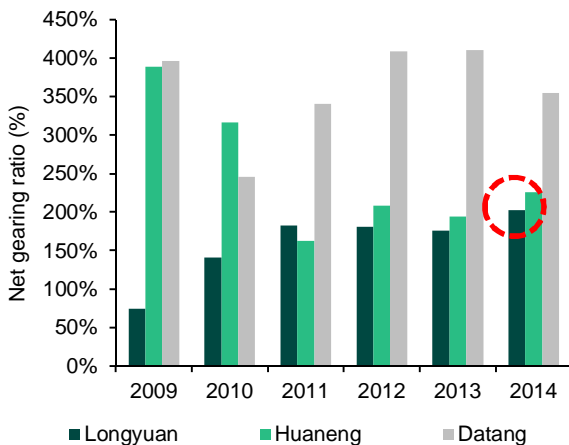
Source(s): Company data, ABCI Securities estimates

**Exhibit 3: Longyuan's well-diversified wind power capacity lower the power curtailment rate**


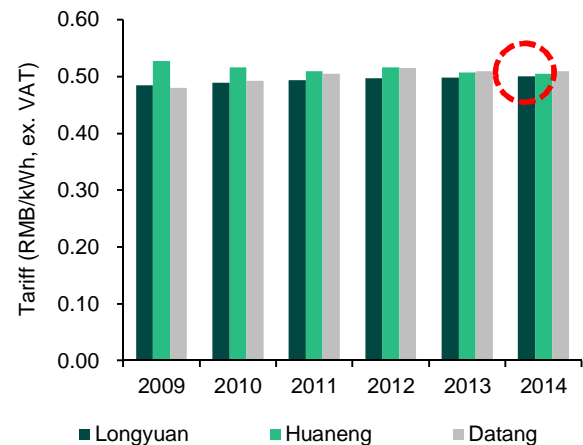
Source(s): Company data, ABCI Securities

**Exhibit 4: Longyuan has the highest utilization hour among peers due to its well-diversified assets**


Source(s): Company data, ABCI Securities

**Exhibit 5: Lowest net gearing ratio among peers suggested a healthier balance sheet**


Source(s): Company data, ABCI Securities

**Exhibit 6: Wind power tariff comparison**


Source(s): Company data, ABCI Securities

## Major concerns

### Wind power curtailment to persist in the near term

Power curtailment has been a persisting challenge for wind power operators. In 2012, about 22% of wind power was wasted due to the issue, and transmission bottleneck has prevented the power from being transferred efficiently from northwest China to coastal regions. As the construction of Ultra-High-Voltage (UHV) transmission network usually lasts three to five years and requires further testing on stability, power curtailment should remain a problem for wind power operators in the near term.

### Coal sales business may limit net income

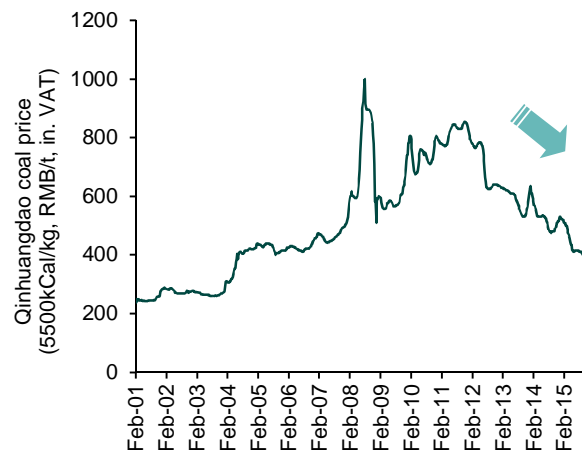
In addition to wind power and coal-fire power businesses, Longyuan is also engaged in coal sales. The Group's coal sales business contributed to 15% of its overall revenue in 2014. With the Qinhuangdao coal price falling in 2015, and recorded 16%YoY decline in 1H15 and 22% YTD, we believe this business may have a negative impact to Longyuan's 2015E net income due to margin contraction.

**Exhibit 7: Longyuan's utilization hour may stay at a relatively low level going forward**



Source(s): Company data, ABCI Securities estimates

**Exhibit 8: Weakening regional coal prices remain an overhang to Longyuan's net income**



Source(s): cqcoal, ABCI Securities

## Future earnings outlook

Longyuan is likely to maintain its leading position among China's wind power operators in the future. The Group's future earnings should maintain a strong growth as the Chinese government continues to encourage the use of renewable energy and improve the power grid system. We expect 2015E net income to be RMB3.8 bn (+49% YoY), driven by improved utilization at 2,030 hours (a 3% increase from 1,980 hours in 2014) and 16%YoY growth in capacity.

### Earnings growth

We project Longyuan's revenue of Longyuan's wind power segment to increase by 23%/16%YoY in 2015E/16E on the back of the 16%/14%YoY organic growth in wind power capacity for the same period. For coal-fire segment, revenue should only see a modest growth of 1%/6%YoY as Longyuan's main focus remains on renewable energy and the Chinese government's intention to reduce reliance of traditional energy. In summary, we believe wind power capacity growth rate will remain robust at the mid-teen level, while utilization hours would stay at above 2,000 hours, suggesting its 2015E /16E net income should grow by 49%/16% YoY.

### Capacity growth

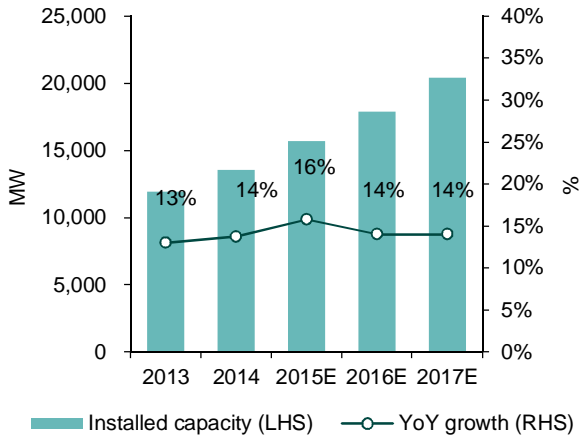
We believe nationwide wind power capacity should continue recording strong growth in the upcoming decade as China tackles air pollution and shifts the national energy structure from traditional coal-fire into renewables. We anticipate Longyuan to add 2.1GW/2.2GW of new wind power capacity in 2015/16E, representing 16%/14% YoY growth respectively. For coal-fire, we see the Group is unlikely to add new capacity in upcoming years.

### Net gearing ratio

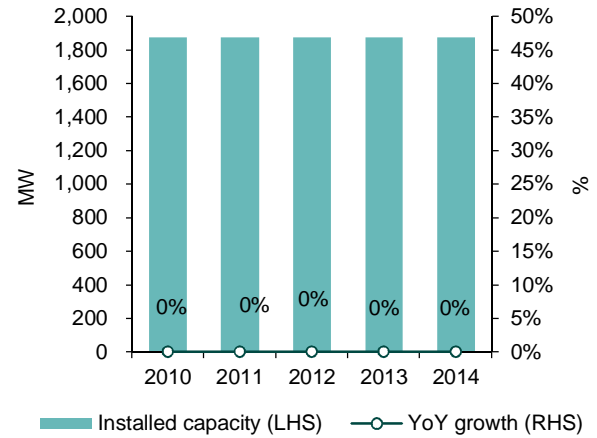
Given Longyuan's high wind capacity base, we expect its capacity to expand in mid-teen rate going forward. Its net gearing ratio should remain at the 200% level.

### Dividend payout ratio

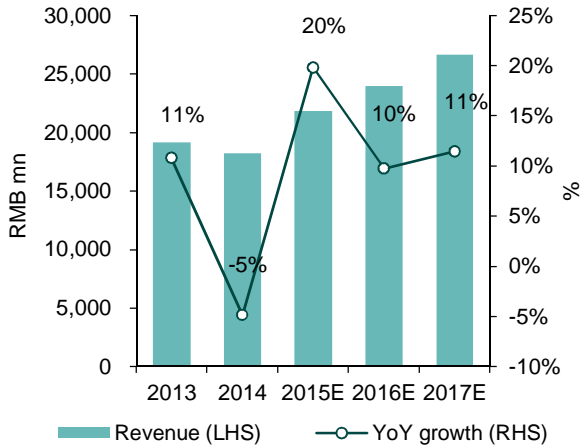
The Group has a stable historic payout ratio of around 20%. As the wind power business is capital-intensive, future capex should remain at a high level. Hence we believe the payout ratio to stay at or under 20% in the future.

**Exhibit 9: Longyuan's wind capacity outlook**


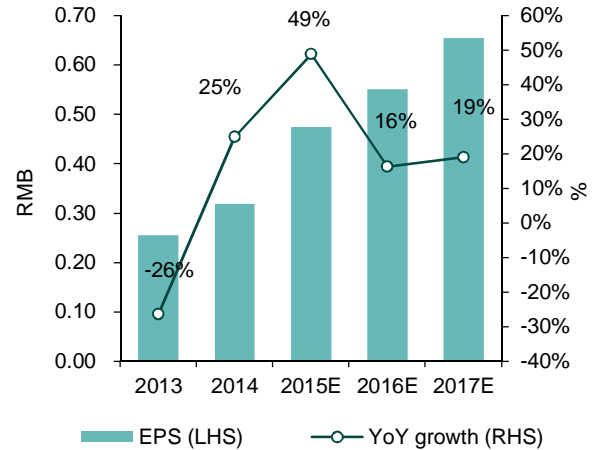
Source(s): ABCI Securities estimates

**Exhibit 10: Longyuan's coal-fire capacity outlook**


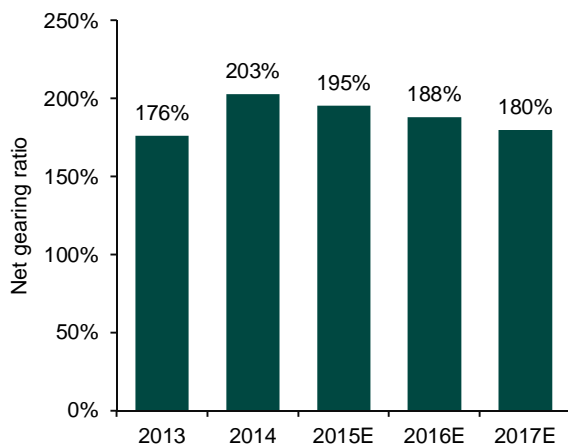
Source(s): ABCI Securities

**Exhibit 11: Longyuan's revenue outlook**


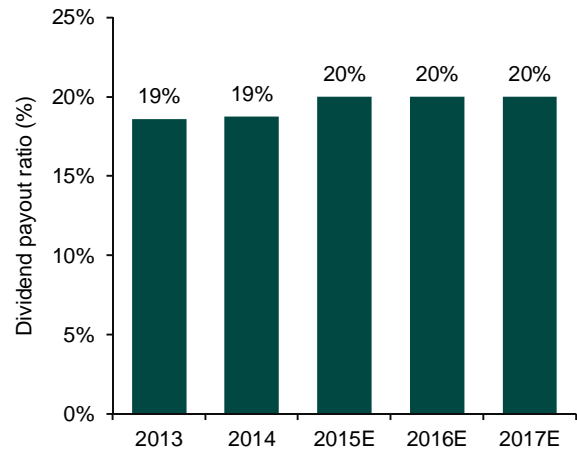
Source(s): ABCI Securities estimates

**Exhibit 12: Longyuan's EPS outlook**


Source(s): ABCI Securities estimates

**Exhibit 13: Longyuan's net gearing ratio**


Source(s): ABCI Securities estimates

**Exhibit 14: Longyuan's dividend payout ratio**


Source(s): ABCI Securities estimates

## Valuation

### Initiate with BUY; TP at HK\$10.80

We initiate coverage on Longyuan with a **BUY** rating and a TP of HK\$10.80 derived from the DCF valuation, which captures the time value of the Group's future cash flow.

Our DCF-derived TP of HK\$10.80 is based on a 9% WACC; the TP is equivalent to 19x/16x 2015E/16E P/E, which represents a premium to the Hong Kong-listed peer average of 12x/10x and a discount to the global peer average at 24x/20x. Longyuan is the largest wind power operator in China with the highest utilization hour and well-diversified wind power assets nationwide. In addition, its lowest unit all-in capacity cost would allow the Group to expand capacity with less financial burden. Hence, we believe the counter deserves a valuation premium to domestic peers. We estimate Longyuan's EPS to grow at a 27% CAGR in 2014-17E, driven by China's strong push on wind power energy. Longyuan's 2016E target P/E of 16x, equivalent to 0.6x PEG and we deem such valuation as attractive.

### Share price catalysts

As China's largest wind power operator with a diversified wind farm portfolio, we believe key catalysts for Longyuan's share price include 1) new, favorable government wind power policy; 2) Better-than-expected monthly operational data; 3) Faster-than-expected capacity growth.

**Exhibit 15: Longyuan's DCF calculation (2015E-2024E)**

| Longyuan's DCF calculation   |              |
|------------------------------|--------------|
| Perpetual growth rate        | 1%           |
| WACC                         | 9%           |
| Terminal value               | 276,164      |
| PV of terminal value         | 120,582      |
| Cum PV of CF stream          | 30,858       |
| Enterprise Value             | 151,440      |
| Less debt                    | (78,656)     |
| Add cash on hand             | 7,532        |
| Less: MI                     | (8,865)      |
| Equity Value                 | 71,451       |
| Shares o/s                   | 8,036        |
| <b>Value per share(HK\$)</b> | <b>10.80</b> |

Source(s): The Company, ABCI Securities estimates

**Exhibit 16: Longyuan's WACC calculation (2015E-2024E)**

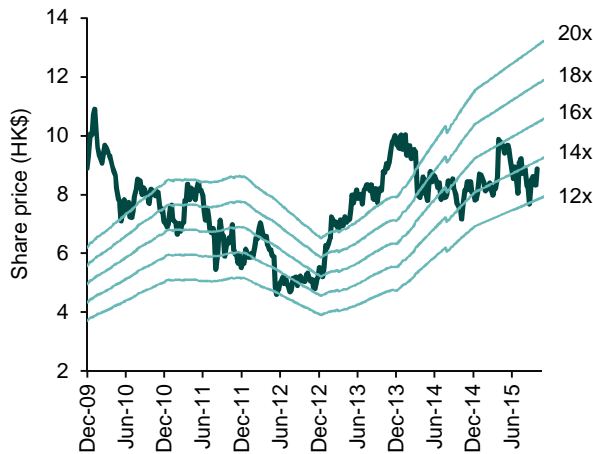
| Assumptions                    |             |
|--------------------------------|-------------|
| Risk Free Rate of Return       | 3.5%        |
| Long Term Cost of Debt         | 5.2%        |
| Equity Risk Premium            | 13.2%       |
| Beta                           | 0.93        |
| Tax Rate                       | 25.0%       |
| Target Debt to Total Capital   | 60.0%       |
| Target Equity to Total Capital | 40.0%       |
| Cost of Equity                 | 15.7%       |
| <b>WACC</b>                    | <b>8.6%</b> |

Source(s): The Company, ABCI Securities estimates

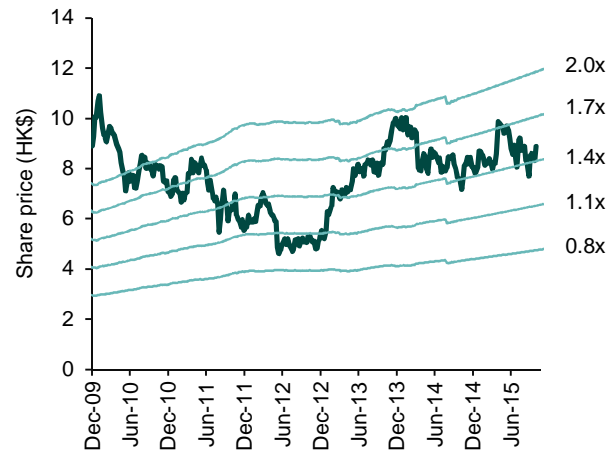
**Exhibit 17: Peer comparison**

| Name                       | Stock code | Price | Mkt Cap (USDmn) | PER (x)     |             | PBR (x)    |            | Dvd Yield |           | ROE        |            |
|----------------------------|------------|-------|-----------------|-------------|-------------|------------|------------|-----------|-----------|------------|------------|
|                            |            |       |                 | FY15E       | FY16E       | FY15E      | FY16E      | FY15E     | FY16E     | FY15E      | FY16E      |
| <b>HK &amp; China</b>      |            |       |                 |             |             |            |            |           |           |            |            |
| China Longyuan             | 916 HK     | 8.75  | 9,073           | 14.9        | 12.7        | 1.6        | 1.4        | 1%        | 2%        | 11%        | 12%        |
| Huaneng Renewables         | 958 HK     | 3.07  | 3,853           | 13.0        | 10.3        | 1.4        | 1.2        | 1%        | 2%        | 11%        | 12%        |
| Datang Renewable           | 1798 HK    | 1.07  | 1,004           | 17.1        | 11.6        | 0.6        | 0.6        | 1%        | 1%        | 3%         | 5%         |
| Huadian Fuxin Energy       | 816 HK     | 3.13  | 3,396           | 9.0         | 7.2         | 1.2        | 1.1        | 2%        | 3%        | 14%        | 15%        |
| Beijing Jingneng Clean     | 579 HK     | 2.65  | 2,349           | 7.7         | 6.7         | 1.0        | 0.9        | 3%        | 4%        | 13%        | 15%        |
| China Suntien Green Energy | 956 HK     | 1.55  | 743             | 11.1        | 8.8         | 0.6        | 0.6        | 3%        | 4%        | 5%         | 7%         |
| <b>Avg.</b>                |            |       |                 | <b>12.1</b> | <b>9.6</b>  | <b>1.1</b> | <b>1.0</b> | <b>2%</b> | <b>2%</b> | <b>10%</b> | <b>11%</b> |
| <b>International</b>       |            |       |                 |             |             |            |            |           |           |            |            |
| Acciona Sa                 | ANA SM     | 70.55 | 4,597           | 22.5        | 19.8        | 1.2        | 1.2        | 3%        | 3%        | 6%         | 6%         |
| Theolia Sa - Regr          | TEO FP     | 0.60  | 127             | n.a.        | n.a.        | 0.0        | 0.0        | n.a.      | n.a.      | -4%        | -1%        |
| Edp Renovaveis Sa          | EDPR PL    | 6.02  | 5,972           | 36.5        | 28.1        | 0.9        | 0.9        | 1%        | 1%        | 3%         | 3%         |
| Greentech Energy Systems   | GES DC     | 7.50  | 122             | 13.4        | 13.4        | 0.5        | 0.5        | 1%        | 1%        | 4%         | 4%         |
| <b>Avg.</b>                |            |       |                 | <b>24.1</b> | <b>20.4</b> | <b>0.7</b> | <b>0.6</b> | <b>1%</b> | <b>2%</b> | <b>2%</b>  | <b>3%</b>  |

Source(s): Bloomberg, prices are as of Oct 12, 2015

**Exhibit 18: Longyuan's fwd PE chart**


Source(s): Bloomberg, ABCI Securities estimates

**Exhibit 19: Longyuan's fwd PB chart**


Source(s): Bloomberg, ABCI Securities estimates

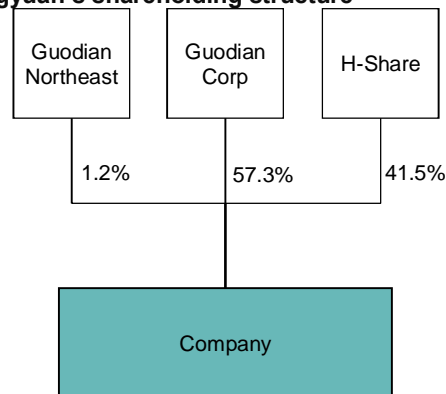
## Company overview

### Background

Longyuan is the largest wind power operator in China accounting for 14% of China's existing wind power capacity in 2014. Its major shareholder is Guodian Corporation, which is the fourth largest power generation company in China in terms of total installed capacity and has a 57% stake in Longyuan.

The Group's key wind farms are spread across major regions in China. Besides wind power, Longyuan also has a coal-fire power generation business accounting for 29% of its 2014 total power output. Longyuan was first listed on the Main Board of the Hong Kong Stock Exchange by global offering in Dec 2009.

### Exhibit 20: Longyuan's shareholding structure



Source(s): Company data, ABCI Securities

### Major assets and business

Longyuan mainly operates the wind power and coal-fire power businesses in China. It is the largest wind power operator in China

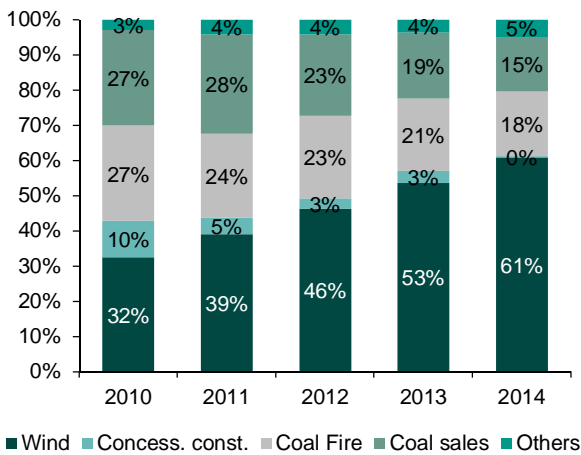
- ◆ **Wind power:** Longyuan currently has an installed wind power capacity of 13,543 MW in China, accounting for 14% of national wind capacity in 2014. Most capacity is located in Inner Mongolia and eastern China. In 2014, sales of wind power contributed to 61% of Longyuan's total revenue.
- ◆ **Coal-fire power:** The Group's coal-fire power generation business currently has an installed capacity of 1,875 MW, accounting for 0.2% of national coal-fire capacity in 2014. Longyuan's coal-fire plants are located in Jiangsu province. In 2014, sales of coal-fire power contributed to 18% of Longyuan's total revenue.

As Longyuan continues to develop its wind power business, we believe revenue contribution from this segment will increase in the future.

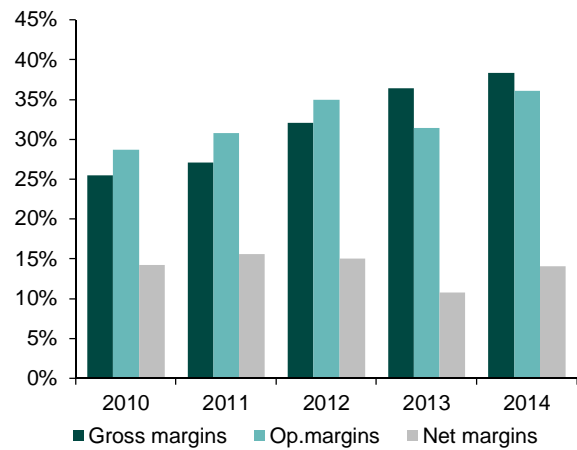
### Revenue breakdown

Longyuan's revenue in 2014 was RMB18.2 bn, down 5% YoY compared to the 11% YoY increase in 2013. The decline was mainly due to 1) lower utilization hours of wind power segment at 1,980 hours, down 6% compared to the 2,111 hours in 2013; 2) Utilization hour fell by 13% YoY in 2014 due to facility upgrade in the coal-fire operation.

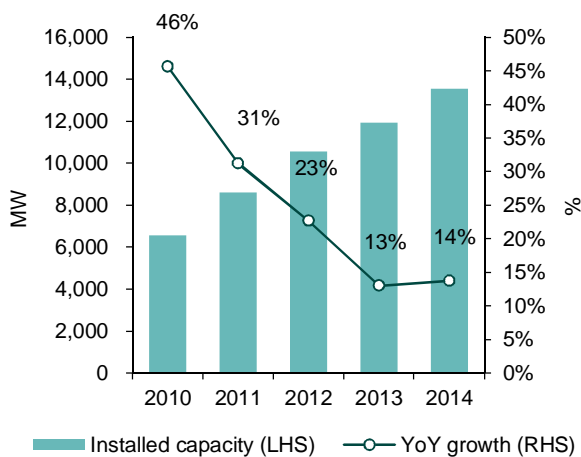
The Group's operating margin increased in 2014 due to the increased contribution from high-margin wind power business. Unlike the coal-fire power generation business, the key cost of wind power is depreciation, which is much lower than the material cost in coal-fire power generation. Overall operating margin was 38% in 2014, 2ppt higher than the 36% in 2013. We believe operating margin should continue to grow in the future.

**Exhibit 21: Historical revenue breakdown**


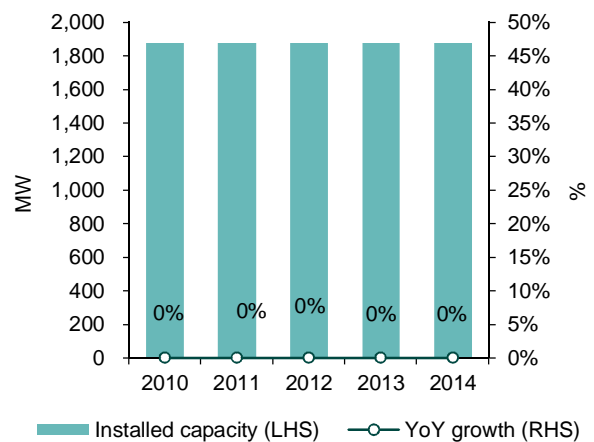
Source(s): Company data, ABCI Securities

**Exhibit 22: Longyuan's historical margins**


Source(s): Company data, ABCI Securities

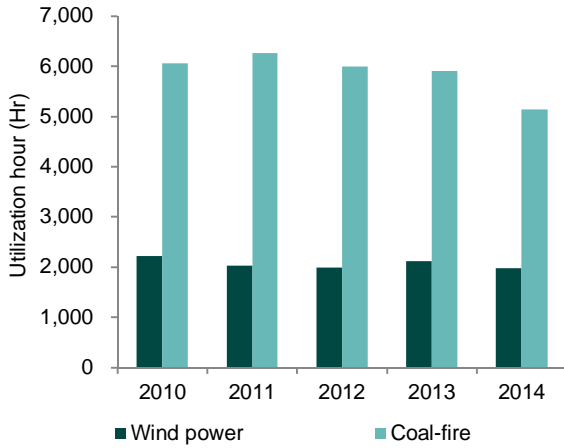
**Exhibit 23: Longyuan's installed wind power capacity**


Source(s): Company data, ABCI Securities

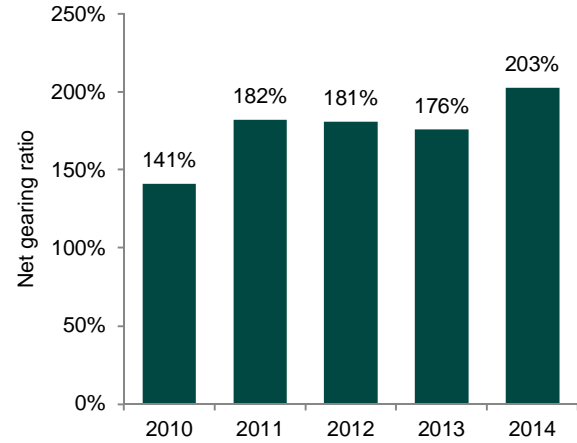
**Exhibit 24: Longyuan's installed coal-fire power capacity**


Source(s): Company data, ABCI Securities

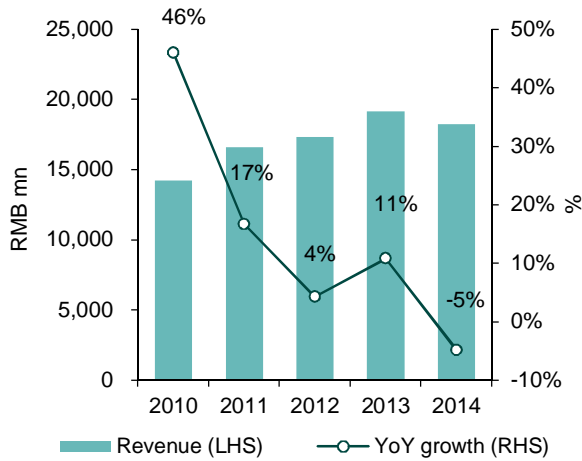


**Exhibit 25: Longyuan's utilization hour trend**


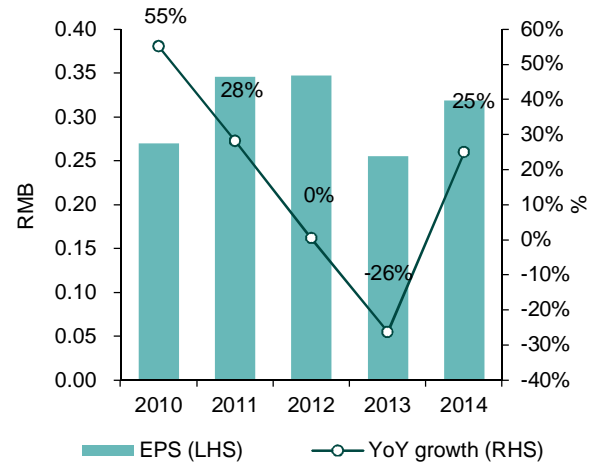
Source(s): Company data, ABCI Securities

**Exhibit 26: Longyuan's net gearing ratio**


Source(s): Company data, ABCI Securities

**Exhibit 27: Longyuan's overall revenue growth trend**


Source(s): Company data, ABCI Securities

**Exhibit 28: Longyuan's overall EPS growth trend**


Source(s): Company data, ABCI Securities



Consolidated income statement (2013A-2017E)

| FY Ended Dec 31 (RMB mn)                  | 2013A          | 2014A          | 2015E          | 2016E          | 2017E          |
|---|----------------|----------------|----------------|----------------|----------------|
| <b>Revenue</b>                            | <b>19,147</b>  | <b>18,207</b>  | <b>21,654</b>  | <b>23,771</b>  | <b>26,491</b>  |
| Wind power                                | 10,910         | 11,133         | 14,216         | 16,538         | 19,049         |
| Coal-fire power                           | 7,525          | 6,156          | 6,073          | 6,258          | 6,348          |
| Other                                     | 712            | 919            | 1,365          | 974            | 1,094          |
| <b>COGS</b>                               | <b>-12,189</b> | <b>-11,234</b> | <b>-12,237</b> | <b>-13,287</b> | <b>-14,501</b> |
| <b>Gross profit</b>                       | <b>6,958</b>   | <b>6,973</b>   | <b>9,417</b>   | <b>10,484</b>  | <b>11,990</b>  |
| SG&A                                      | -399           | -378           | -325           | -357           | -397           |
| Net financial income (cost)               | -2,538         | -2,951         | -3,490         | -3,692         | -3,899         |
| Other income and gains                    | -488           | 418            | -59            | 2              | -38            |
| <b>Pre-tax profit</b>                     | <b>3,533</b>   | <b>4,062</b>   | <b>5,543</b>   | <b>6,439</b>   | <b>7,655</b>   |
| Income tax                                | -561           | -510           | -665           | -773           | -919           |
| <b>Net profit</b>                         | <b>2,972</b>   | <b>3,551</b>   | <b>4,878</b>   | <b>5,666</b>   | <b>6,737</b>   |
| Profit attributable to:                   |                |                |                |                |                |
| Minority interests                        | -921           | -993           | -1,073         | -1,247         | -1,482         |
| <b>Equity shareholders of the Company</b> | <b>2,052</b>   | <b>2,558</b>   | <b>3,805</b>   | <b>4,419</b>   | <b>5,255</b>   |
| <b>Basic EPS (RMB)</b>                    | <b>0.255</b>   | <b>0.318</b>   | <b>0.473</b>   | <b>0.550</b>   | <b>0.654</b>   |
| <b>DPS (RMB)</b>                          | <b>0.047</b>   | <b>0.060</b>   | <b>0.095</b>   | <b>0.110</b>   | <b>0.131</b>   |

Source(s): Company, ABCI Securities estimates

Consolidated balance sheet (2013A-2017E)

| As of Dec 31 (RMB mn)                | 2013A          | 2014A          | 2015E          | 2016E          | 2017E          |
|--------------------------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Current assets</b>                | <b>13,807</b>  | <b>14,753</b>  | <b>18,894</b>  | <b>20,713</b>  | <b>24,270</b>  |
| Cash and equivalent                  | 2,719          | 2,389          | 7,532          | 8,337          | 10,601         |
| Pledged and restricted bank deposits | 725            | 440            | 440            | 440            | 440            |
| Trade and bill receivables           | 6,710          | 6,411          | 5,933          | 6,513          | 7,258          |
| Other receivables and prepayments    | 2,399          | 4,072          | 3,560          | 3,908          | 4,355          |
| Inventories                          | 753            | 1,017          | 1,006          | 1,092          | 1,192          |
| Other current assets                 | 500            | 425            | 425            | 425            | 425            |
| <b>Non-current assets</b>            | <b>97,299</b>  | <b>108,765</b> | <b>118,320</b> | <b>126,963</b> | <b>136,680</b> |
| Property, plant and equipment        | 79,985         | 88,307         | 97,599         | 105,586        | 114,839        |
| Investment properties                | 20             | 5              | 5              | 5              | 5              |
| Intangible assets                    | 8,697          | 8,541          | 8,403          | 8,267          | 8,133          |
| Investment in JV and associates      | 2,297          | 3,602          | 3,927          | 4,284          | 4,681          |
| Deferred tax assets                  | 162            | 155            | 155            | 155            | 155            |
| Other non-current assets             | 6,139          | 8,155          | 8,232          | 8,667          | 8,868          |
| <b>Total assets</b>                  | <b>111,106</b> | <b>123,518</b> | <b>137,214</b> | <b>147,676</b> | <b>160,950</b> |
| <b>Current liabilities</b>           | <b>36,775</b>  | <b>46,248</b>  | <b>54,101</b>  | <b>57,639</b>  | <b>62,292</b>  |
| Trade and bill payables              | 2,142          | 1,021          | 1,341          | 1,456          | 1,589          |
| Other payables                       | 9,936          | 9,151          | 9,500          | 10,305         | 11,236         |
| Short term borrowings                | 24,697         | 36,070         | 43,261         | 45,878         | 49,466         |
| Other current liabilities            | 0              | 6              | 0              | 0              | 0              |
| <b>Non-current liabilities</b>       | <b>36,201</b>  | <b>36,421</b>  | <b>38,053</b>  | <b>40,195</b>  | <b>43,131</b>  |
| Deferred tax liabilities             | 116            | 107            | 107            | 107            | 107            |
| Long-term borrowings                 | 33,205         | 33,762         | 35,395         | 37,537         | 40,473         |
| Other non-current liabilities        | 2,881          | 2,552          | 2,552          | 2,552          | 2,552          |
| <b>Total liabilities</b>             | <b>72,977</b>  | <b>82,668</b>  | <b>92,155</b>  | <b>97,834</b>  | <b>105,423</b> |
| <b>Minority interests</b>            | <b>7,176</b>   | <b>7,792</b>   | <b>8,865</b>   | <b>10,112</b>  | <b>11,594</b>  |
| <b>Shareholders' equities</b>        | <b>30,954</b>  | <b>33,057</b>  | <b>36,194</b>  | <b>39,729</b>  | <b>43,933</b>  |

Source(s): Company, ABCI Securities estimates



**Consolidated cash flow statement (2013A-2017E)**

| <b>FY ended Dec 31 (RMB mn)</b>         | <b>2013A</b>   | <b>2014A</b>   | <b>2015E</b>   | <b>2016E</b>   | <b>2017E</b>   |
|---|----------------|----------------|----------------|----------------|----------------|
| <b>Profit before tax</b>                | <b>3,533</b>   | <b>4,062</b>   | <b>5,543</b>   | <b>6,439</b>   | <b>7,655</b>   |
| Change in depreciation and amortization | 4,401          | 5,001          | 6,076          | 6,730          | 7,476          |
| Change in working capital               | 3,065          | 1,976          | 1,671          | -94            | -227           |
| Net financial cost (income)             | 2,757          | 2,886          | 3,007          | 3,233          | 3,651          |
| Income tax paid                         | -566           | -522           | -993           | -1,073         | -1,247         |
| Net interest received                   | 0              | 0              | 0              | 0              | 0              |
| Others                                  | 422            | -534           | -325           | -357           | -397           |
| <b>CF Operating</b>                     | <b>13,611</b>  | <b>12,868</b>  | <b>14,979</b>  | <b>14,878</b>  | <b>16,911</b>  |
| Capex                                   | -10,509        | -18,233        | -14,927        | -14,265        | -16,262        |
| Increase in intangible assets           | 0              | 0              | -302           | -317           | -333           |
| Others                                  | 20             | -2,615         | 198            | 141            | 399            |
| <b>CF Investing</b>                     | <b>-10,489</b> | <b>-20,848</b> | <b>-15,031</b> | <b>-14,440</b> | <b>-16,196</b> |
| Net Capital raise                       | 0              | 0              | 0              | 0              | 0              |
| Net debt financing                      | -1,112         | 12,028         | 8,824          | 4,760          | 6,524          |
| Dividend payout                         | -1,037         | -1,042         | -480           | -761           | -884           |
| Interest paid                           | -3,257         | -3,376         | -3,149         | -3,631         | -4,090         |
| Others                                  | -80            | 45             | 0              | 0              | 0              |
| <b>CF Financing</b>                     | <b>-5,486</b>  | <b>7,655</b>   | <b>5,195</b>   | <b>367</b>     | <b>1,550</b>   |
| <b>Net change in cash</b>               | <b>-2,364</b>  | <b>-325</b>    | <b>5,143</b>   | <b>805</b>     | <b>2,265</b>   |
| Cash at the beginning                   | 5,099          | 2,719          | 2,389          | 7,532          | 8,337          |
| Adjustment (Time deposit & FX effect)   | -15            | -6             | 0              | 0              | 0              |
| <b>Cash at the end</b>                  | <b>2,719</b>   | <b>2,389</b>   | <b>7,532</b>   | <b>8,337</b>   | <b>10,601</b>  |

Source(s): Company, ABCI Securities estimates

**Key Ratio (2013A-2017E)**

| <b>FY ended Dec 31 (RMB mn)</b>           | <b>2013A</b> | <b>2014A</b> | <b>2015E</b> | <b>2016E</b> | <b>2017E</b> |
|---|--------------|--------------|--------------|--------------|--------------|
| <b>Sales mixed (%)</b>                    |              |              |              |              |              |
| Wind power                                | 56.98        | 61.14        | 65.65        | 69.57        | 71.91        |
| Coal-fire power                           | 39.30        | 33.81        | 28.05        | 26.33        | 23.96        |
| Other                                     | 3.72         | 5.05         | 6.30         | 4.10         | 4.13         |
| <b>Total</b>                              | <b>100</b>   | <b>100</b>   | <b>100</b>   | <b>100</b>   | <b>100</b>   |
| <b>Profit &amp; loss ratios (%)</b>       |              |              |              |              |              |
| Gross margin                              | 36.34        | 38.30        | 43.49        | 44.11        | 45.26        |
| Operating profit margin                   | 31.40        | 36.02        | 40.21        | 41.12        | 42.12        |
| Pre-tax margin                            | 18.45        | 22.31        | 25.60        | 27.09        | 28.90        |
| Net profit margin                         | 15.52        | 19.51        | 22.53        | 23.84        | 25.43        |
| Selling & administrative expenses/revenue | 2.08         | 2.08         | 1.50         | 1.50         | 1.50         |
| Effective tax rate                        | 15.88        | 12.57        | 12.00        | 12.00        | 12.00        |
| <b>Growth (%)</b>                         |              |              |              |              |              |
| Revenue                                   | 10.75        | -4.91        | 18.93        | 9.77         | 11.44        |
| Gross profit                              | 25.59        | 0.22         | 35.04        | 11.34        | 14.36        |
| Operating profit                          | -0.56        | 9.11         | 32.77        | 12.24        | 14.15        |
| Net profit                                | -10.62       | 19.48        | 37.35        | 16.16        | 18.90        |
| <b>Balance sheet ratios</b>               |              |              |              |              |              |
| Current ratio (x)                         | 0.38         | 0.32         | 0.35         | 0.36         | 0.39         |
| Quick ratio (x)                           | 0.28         | 0.20         | 0.26         | 0.27         | 0.29         |
| Cash ratio (x)                            | 0.09         | 0.06         | 0.15         | 0.15         | 0.18         |
| Trade and bill receivables days           | 127.88       | 128.51       | 100.00       | 100.00       | 100.00       |
| Trade and bill payables turnover days     | 64.15        | 33.16        | 40.00        | 40.00        | 40.00        |
| Inventory turnover days                   | 22.55        | 33.05        | 30.00        | 30.00        | 30.00        |
| Total debt / equity ratio (%)             | 187.06       | 211.25       | 217.32       | 209.96       | 204.72       |
| Net debt / equity ratio (%)               | 175.93       | 202.69       | 195.29       | 187.87       | 179.59       |
| <b>Returns (%)</b>                        |              |              |              |              |              |
| ROAA                                      | 1.9          | 2.2          | 2.9          | 3.1          | 3.4          |
| ROAE                                      | 6.8          | 8.0          | 11.0         | 11.6         | 12.6         |
| Payout ratio                              | 18.61        | 18.76        | 20.00        | 20.00        | 20.00        |

Source(s): Company, ABCI Securities estimates



October 13, 2015  
 Company Report  
 Rating: BUY  
 TP: HK\$ 3.70

|                         |        |
|-------------------------|--------|
| H-Share price (HK\$)    | 3.07   |
| Est. share price return | 20.52% |
| Est. dividend yield     | 1.48%  |
| Est. total return       | 22.00% |

Analyst: Kelvin Ng  
 Tel: (852) 2147 8869  
 Email: kelvinng@abci.com.hk

**Key Data**

|                                     |           |
|-------------------------------------|-----------|
| Market share (HK\$m)                | 29,865    |
| 3-mth avg. daily turnover (HK\$ mn) | 75        |
| 52-week high/low (HK\$)             | 3.80/2.33 |
| Issued shares (mn)                  | 9,728     |
| Major shareholder(s) (%):           |           |
| Huaneng Group                       | 54.0      |

Source(s): Company, Bloomberg, ABCI Securities

**FY14 Revenue breakdown (%)**

|                      |      |
|----------------------|------|
| Sales of electricity | 99.4 |
| Others               | 0.6  |

Source(s): Company, ABCI Securities

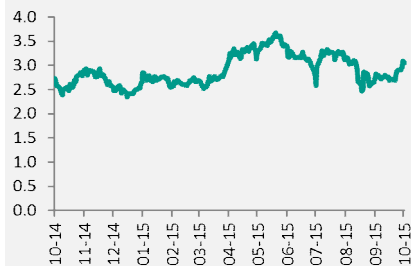
**Share performance (%)**

|       | Absolute | Relative* |
|-------|----------|-----------|
| 1-mth | 9.64%    | 3.94%     |
| 3-mth | -4.06%   | 5.22%     |
| 6-mth | -4.78%   | 12.75%    |

\*Relative to HSI

Source(s): Bloomberg, ABCI Securities

**1-Year stock performance**



Source(s): Bloomberg, ABCI Securities

## Huaneng Renewables (958 HK)

### A fast-growing play and a future giant

- Huaneng's capacity would grow by 18%/20% YoY in 2015E/16E due to its low base
- Huaneng's parent company, Huaneng Group, is the largest IPP in China and will provide strong support to its renewable arm
- Huaneng is currently trading at 13x 2015E P/E, representing a 13%/24% discount to Longyuan and Datang Renewable. With Huaneng's quality ROE and capacity growth, we believe its current valuation is attractive
- We recommend **BUY** with a DCF-derived TP at HK\$3.70, which represents 16x/14x 2015E/16E P/E and 1.7x/1.5x 2015E/16E P/B

**Strong 2015/16E capacity growth at 18%/20% YoY.** In the analyst meeting for 1H15 results, the Group's management said 2GW/1.5GW of new capacity will be added in 2015 and 2016. We expect Huaneng's capacity to grow by 18%/20% YoY in 2015E/16E. Huaneng's capacity expanded by 37% CAGR in 2009-14, and we believe the Group is very likely to maintain its solid growth in 2015E/16E. Huaneng's installed wind power capacity by end-2014 was equivalent to 56% to that of the Longyuan, which is the market leader in China's wind power generation. The Group is likely to ramp up its capacity in the future.

**Backed by its strong parent company.** On Sep 30, 2013, the parent company of Huaneng Renewables, Huaneng Group, agreed to transfer 100GWh of generation rights to Huaneng Renewables. Although this only added 1% to gross generation of Huaneng Renewables in 2013, this action illustrates the willingness of its parent company (the largest IPP in China) to support its renewable energy arm.

**Attractive valuation.** The Group is currently trading at 13x 2015E P/E based on Bloomberg estimate, which represents a 24% discount to its close peer, Datang Renewable (1798 HK), at 17x and 13% lower than market leader, Longyuan (916 HK), at 15x. We believe Huaneng's current valuation is attractive as the Group's higher ROE (6.6% in 2014 vs. Datang's -1.4%) and better future capacity growth outlook than Datang Renewable (18% in 2015E vs. Datang's 14%). Its current valuation is unjustified and re-rating may take place in near term.

**BUY with TP at HK\$ 3.70.** Our DCF-derived TP was HK\$3.70 based on a WACC of 8%, representing 16x/14x FY15E/16E P/E and 1.7x/1.5x FY15E/16E P/B. Recommend **BUY** on robust wind capacity growth, a relatively low unit all-in capacity cost, and firm support by a strong parent company.

**Risk factors:** (1) Slower-than-expected capacity growth; (2) Earnings dilution; (3) Policy risks.

**Results and Valuation**

| FY ended Dec 31     | 2013A | 2014A | 2015E | 2016E  | 2017E  |
|---------------------|-------|-------|-------|--------|--------|
| Revenue (RMB mn)    | 5,909 | 6,151 | 8,498 | 10,598 | 12,548 |
| Chg (% YoY)         | 46.7  | 4.1   | 38.2  | 24.7   | 18.4   |
| Net Income (RMB mn) | 913   | 1,066 | 1,813 | 2,122  | 2,684  |
| Chg (% YoY)         | 63.6  | 16.8  | 70.0  | 17.0   | 26.5   |
| EBITDA (RMB mn)     | 4,752 | 5,614 | 7,758 | 9,690  | 11,439 |
| Chg (% YoY)         | 25.6  | 18.2  | 38.2  | 24.9   | 18.0   |
| EPS (RMB)           | 0.107 | 0.124 | 0.186 | 0.218  | 0.276  |
| Chg (% YoY)         | 61.3  | 16.2  | 50.5  | 17.0   | 26.5   |
| BVPS (RMB)          | 1.638 | 1.871 | 1.845 | 2.070  | 2.291  |
| Chg (% YoY)         | 17.1  | 14.2  | -1.4  | 12.3   | 10.7   |
| P/E (x)             | 23.71 | 20.40 | 13.55 | 11.58  | 9.16   |
| P/B (x)             | 1.54  | 1.35  | 1.37  | 1.22   | 1.10   |
| ROE (%)             | 6.51  | 6.62  | 10.11 | 10.54  | 12.05  |
| ROA (%)             | 1.50  | 1.44  | 1.94  | 1.98   | 2.27   |
| DPS (RMB)           | 0.021 | 0.023 | 0.037 | 0.044  | 0.055  |
| Yield (%)           | 0.83  | 0.89  | 1.48  | 1.73   | 2.18   |
| Net gearing* (%)    | 194.1 | 225.8 | 289.1 | 300.5  | 298.7  |

\*Net gearing=Net debt/Total equity

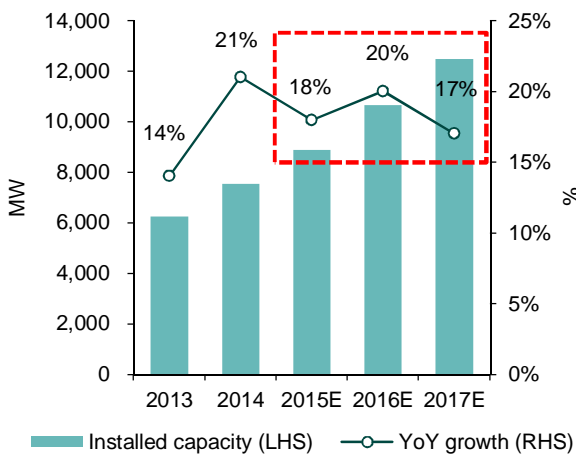
Source(s): Bloomberg, ABCI Securities estimates

## Key positives

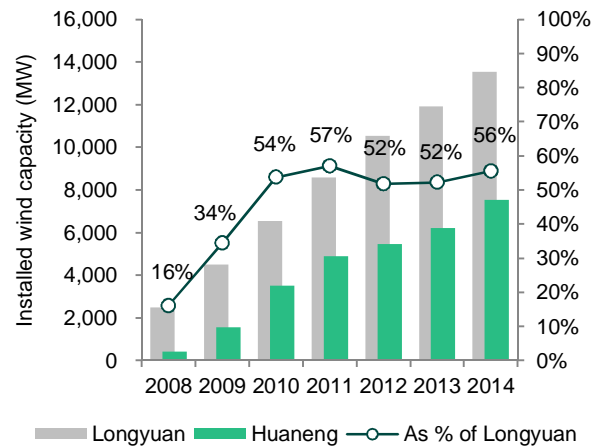
### Strong 2015/16E capacity growth at 18%/20% YoY

In the analyst meeting for 1H15 results, the Group's management said growth is 2GW/1.5GW of new capacity will be added in 2015 and 2016. We expect Huaneng's capacity to grow by 18%/20% YoY in 2015E/16E. Huaneng's capacity expanded by 37% CAGR in 2009-14, and we believe the Group is very likely to maintain its solid growth in 2015E/16E. Huaneng's installed wind power capacity by end-2014 was equivalent to 56% to that of the Longyuan, which is the market leader in China's wind power generation. The Group is likely to ramp up its capacity in the future.

**Exhibit 1: Huaneng's wind capacity growth should remain robust**



**Exhibit 2: Huaneng accounts for 56% of Longyuan's installed wind power capacity**



Source(s): Company data, ABCI Securities estimates

Source(s): Company data, ABCI Securities

### Backed by a strong parent company

Backed by its strong parent company. On Sep 30, 2013, the parent company of Huaneng Renewables, Huaneng Group, agreed to transfer 100GWh of generation rights to Huaneng Renewables. Although this only added 1% to gross generation of Huaneng Renewables in 2013, this action illustrates the willingness of its parent company (the largest IPP in China) to support its renewable energy arm.

### Attractive valuation

The Group is currently trading at 13x 2015E P/E based on Bloomberg estimate, which represents a 24% discount to its close peer, Datang Renewable (1798 HK), at 17x and 13% lower than market leader, Longyuan (916 HK), at 15x. We believe Huaneng's current valuation is attractive as the Group has a higher ROE (6.6% in 2014 vs. Datang's -1.4%) and better future capacity growth outlook than Datang Renewable (18% in 2015E vs. Datang's 14%). In addition, although Huaneng's wind farms are located in less ideal locations than those of Longyuan and this may have resulted in a lower utilization hour (caused by power curtailment), the counter is currently trading at 13% discount to Longyuan, and we believe the negatives have already been priced in. Hence, we believe Huaneng's current valuation is attractive.

### Relatively low all-in capacity cost and net gearing are advantages

As wind power operation is increasingly capital-intensive, a lower unit all-in capacity cost become crucial for wind power operators to expand business nationwide. Huaneng's unit all-in capacity cost is at around RMB11/W, 8% lower than the industry average of RMB12/W. This should provide the Group a key advantage to expand its capacity with less capital.

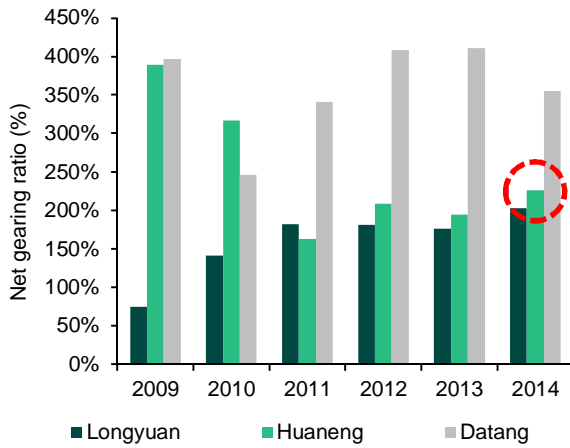
Driven by a relative low all-in capacity cost and better operational management, Huaneng's net gearing ratio (2014: 226%) is relatively low compared to 354% in

Datang Renewable (1798 HK) and 319% in Huadian Fuxin (816 HK). A lower net gearing ratio should enable the Group to expand capacity and acquire assets at greater speed and lower cost.

**Increasing exposure in southern China should help improve utilization hour**

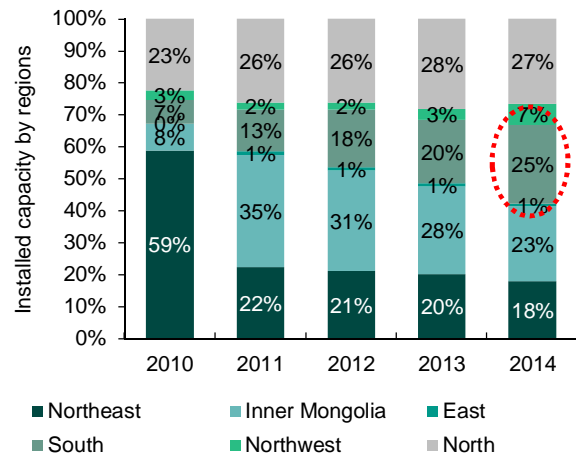
Given wind power operation in north China is severely disrupted by power curtailment caused by bottleneck of power transmission system. Huaneng used to have a high exposure in northern China (Northeast and Inner Mongolia regions accounted for 67% of its total capacity in 2010), which negatively impacted its utilization hours. However, the Group has been increasing its exposure in south China in recent years and the region accounted 25% of total capacity in 2014, compared to 7% in 2010. Huaneng's determination to expand in south China should boost utilization hour in the future.

**Exhibit 3: Huaneng's net gearing ratio is relatively low when compared to peers**



Source(s): Company data, ABCI Securities

**Exhibit 4: Huaneng's capacity in East and South regions have been increasing**



Source(s): Company data, ABCI Securities

## Major concerns

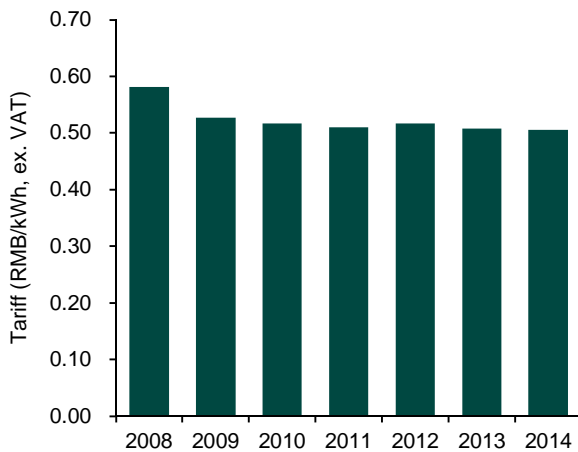
### Long-term wind power tariffs to maintain a downtrend

Like most wind power operators, Huaneng's future wind power tariff is likely to maintain a downtrend because 1) China is likely to encourage the switch from traditional coal-fire power to wind energy by lowering wind power tariff; 2) China may lower the financial burden of industrial power users to boost the weakening industrial activities. Hence, we believe China's wind power tariff would trend down over the long term. Based on our estimates, for every 1% decline in wind power tariff, Huaneng's 2015E/16E earnings will fall by 3.7%/4.0%.

### Highest interest costs among peers

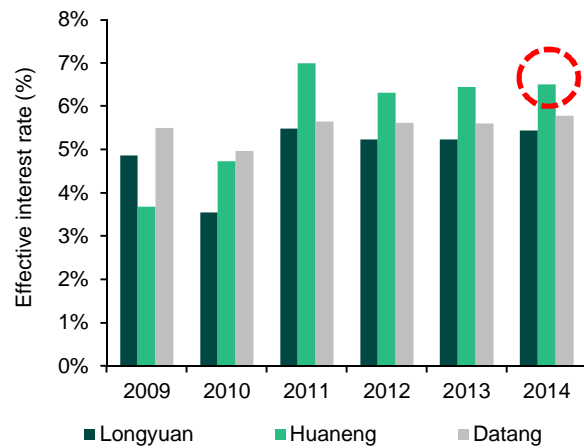
Huaneng has the highest interest cost rate among the three operators in our coverage universe. Its effective interest rate was 6.5% in 2014, higher than Longyuan's 5.4% and Datang's 5.8%. Its declining interest coverage ratio of 1.5x in 2014 suggests any increase in the interest rate could negatively impact its net income. We estimate that for every 1% rise in interest rate, Huaneng's 2015E/16E net income will fall by 18%/22%.

**Exhibit 5: Huaneng's wind power tariff has been trending down**



Source(s): Company data, ABCI Securities

**Exhibit 6: Huaneng has the highest effective interest rate among peers**



Source(s): Company data, ABCI Securities

## Future earnings outlook

Huaneng's low capacity base at present and low gearing ratio means aggressive expansion is likely in the future. We anticipate its 2015E net income to grow by 70% YoY to RMB 1.8 bn, driven by the 18% YoY wind power capacity expansion and a 7% YoY increase in utilization hours from 1,875 hours in 2014 to 2,004 hours in 2015E.

### Earnings growth

Huaneng's net income would reach RMB 1.8bn/RMB2.1bn in 2015E/16E, thanks to the robust wind capacity growth at 18%/20%YoY in the same period. Going forward, Huaneng is likely to maintain a double-digit growth in earnings based on its rapid capacity expansion. We believe the major overhangs to Huaneng's future earnings would include 1) decline in utilization hour on poor wind resources and potential power curtailment; 2) Increase in maintenance cost; 3) Increase in financing cost; 4).Reduced wind power tariff.

### Capacity growth

Huaneng is likely to be the fastest -growing wind power operator in the next few years as it is determined to become a wind energy giant in China. Management has revealed aggressive expansion plan of adding 2GW/1.5GW of new capacity in wind power in 2015E/16E. We estimate Huaneng's capacity would grow by 18%/20%YoY in 2015/16E. Looking forward, we believe the Group would maintain a double-digit capacity growth that would elevate its earnings.

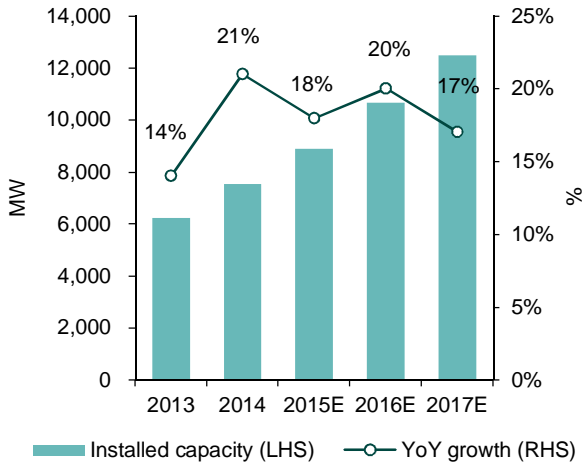
### Net gearing ratio

We believe Huaneng's future capex growth should remain high due to the Group's expansion in south China. Its gearing ratio is unlikely to fall significant in the near term. Its long-term net gearing ratio should stay at the 200%-300% level.

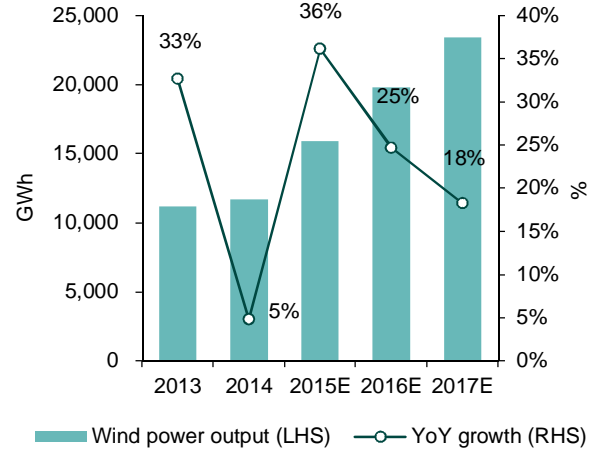
### Dividend payout ratio

The Group's first dividend was issued in 2012 with a payout ratio of 23%. No guidance on its long-term payout ratio has been given. Considering the capital-intensive nature of the business and its high capex in the future; we anticipate a long-term payout ratio at ~20%.

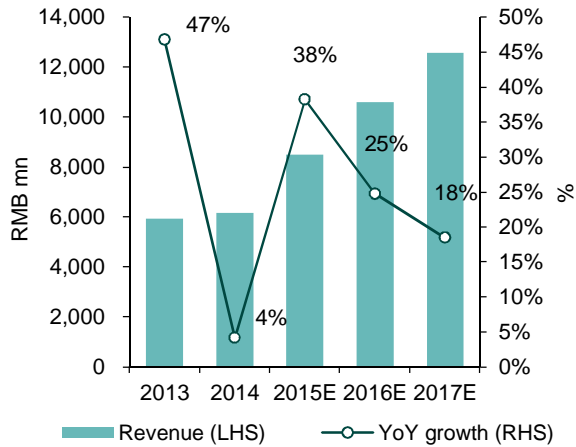


**Exhibit 7: Huaneng's wind capacity outlook**


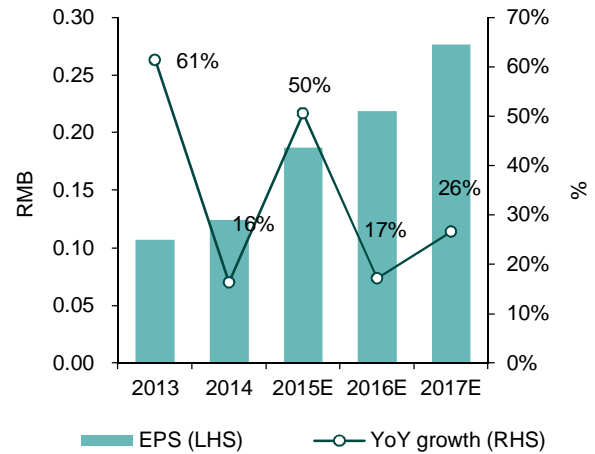
Source(s): ABCI Securities estimates

**Exhibit 8: Huaneng's gross wind power output**


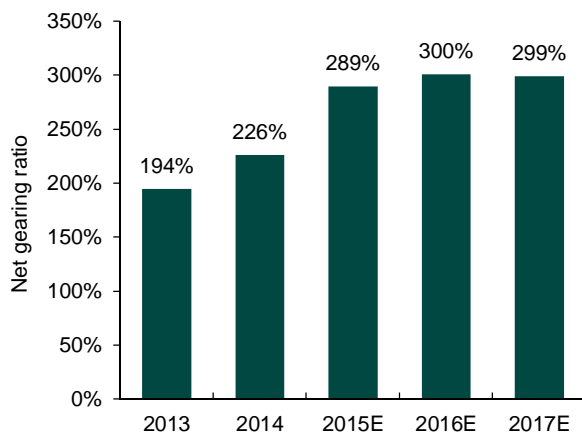
Source(s): ABCI Securities estimates

**Exhibit 9: Huaneng's revenue outlook**


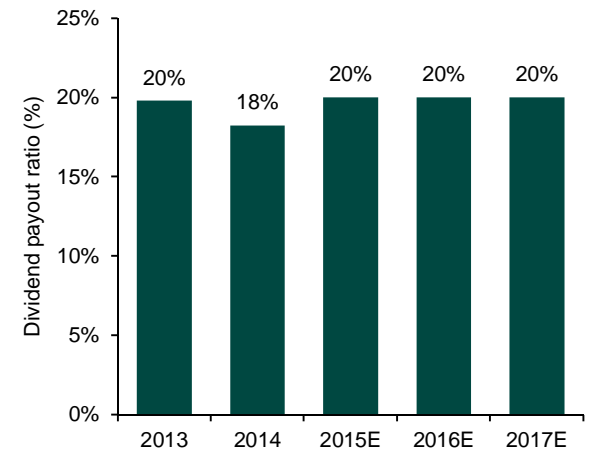
Source(s): ABCI Securities estimates

**Exhibit 10: Huaneng's EPS outlook**


Source(s): ABCI Securities estimates

**Exhibit 11: Huaneng's net gearing ratio**


Source(s): ABCI Securities estimates

**Exhibit 12: Huaneng's dividend payout ratio**


Source(s): ABCI Securities estimates

## Valuation

### Initiate with BUY, TP at HK\$3.70

We apply the DCF method in our valuation as future cash inflow is crucial to wind power operators. Initial investment by operators is high and asset value should emerge in future.

We initiate coverage on Huaneng with a **BUY** rating with a DCF-derived TP at HK\$3.70 based on an 8% WACC. Our TP is equivalent to 16x/14x 2015E/16E P/E and 1.7x/1.5x 2015E/16E P/B. Given Huaneng's asset quality is lower than Longyuan's, our lower valuation (Longyuan's TP equates to 19x/16x 2015/16E P/E) is justified. Based on Huaneng's robust wind capacity growth, relatively low unit all-in capacity cost and strong support from its parent company, we believe a **BUY** rating is justified.

### Share price catalysts

Given Huaneng is a fast-growing operator, any news on 1) progress of capacity growth in south China; 2) Power grid capacity improvement; 3) China's announcing new supportive policies should serve as strong share price catalysts.

**Exhibit 13: Huaneng's DCF calculation (2015E-2024E)**

| Huaneng's DCF calculation    |             |
|------------------------------|-------------|
| Perpetual growth rate        | 1%          |
| WACC                         | 8%          |
| Terminal value               | 175,863     |
| PV of terminal value         | 79,703      |
| Cum PV of CF stream          | 2,622       |
| Enterprise Value             | 82,325      |
| Less debt                    | (61,497)    |
| Add cash on hand             | 9,634       |
| Less: MI                     | (840)       |
| Equity Value                 | 29,622      |
| Shares o/s                   | 9,725       |
| <b>Value per share(HK\$)</b> | <b>3.70</b> |

Source(s): The Company, ABCI Securities estimates

**Exhibit 14: Huaneng's WACC calculation (2015E-2024E)**

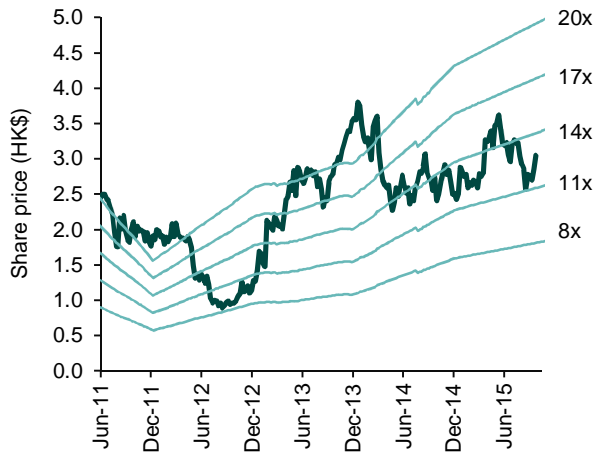
| Assumptions                    |             |
|--------------------------------|-------------|
| Risk Free Rate of Return       | 3.4%        |
| Long Term Cost of Debt         | 6.0%        |
| Equity Risk Premium            | 12.7%       |
| Beta                           | 1.07        |
| Tax Rate                       | 25.0%       |
| Target Debt to Total Capital   | 70.0%       |
| Target Equity to Total Capital | 30.0%       |
| Cost of Equity                 | 17.0%       |
| <b>WACC</b>                    | <b>8.2%</b> |

Source(s): The Company, ABCI Securities estimates

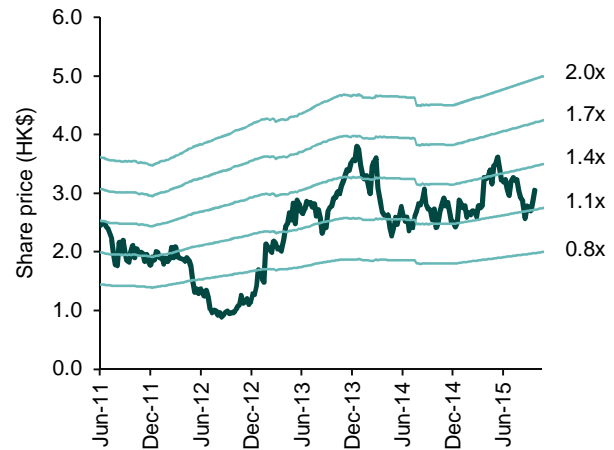
**Exhibit 15: Peer comparison**

| Name                       | Stock code | Price | Mkt Cap (USDmn) | PER (x)     |             | PBR (x)    |            | Dvd Yield |           | ROE        |            |
|----------------------------|------------|-------|-----------------|-------------|-------------|------------|------------|-----------|-----------|------------|------------|
|                            |            |       |                 | FY15E       | FY16E       | FY15E      | FY16E      | FY15E     | FY16E     | FY15E      | FY16E      |
| <b>HK &amp; China</b>      |            |       |                 |             |             |            |            |           |           |            |            |
| China Longyuan             | 916 HK     | 8.75  | 9,073           | 14.9        | 12.7        | 1.6        | 1.4        | 1%        | 2%        | 11%        | 12%        |
| Huaneng Renewables         | 958 HK     | 3.07  | 3,853           | 13.0        | 10.3        | 1.4        | 1.2        | 1%        | 2%        | 11%        | 12%        |
| Datang Renewable           | 1798 HK    | 1.07  | 1,004           | 17.1        | 11.6        | 0.6        | 0.6        | 1%        | 1%        | 3%         | 5%         |
| Huadian Fuxin Energy       | 816 HK     | 3.13  | 3,396           | 9.0         | 7.2         | 1.2        | 1.1        | 2%        | 3%        | 14%        | 15%        |
| Beijing Jingneng Clean     | 579 HK     | 2.65  | 2,349           | 7.7         | 6.7         | 1.0        | 0.9        | 3%        | 4%        | 13%        | 15%        |
| China Suntien Green Energy | 956 HK     | 1.55  | 743             | 11.1        | 8.8         | 0.6        | 0.6        | 3%        | 4%        | 5%         | 7%         |
| <b>Avg.</b>                |            |       |                 | <b>12.1</b> | <b>9.6</b>  | <b>1.1</b> | <b>1.0</b> | <b>2%</b> | <b>2%</b> | <b>10%</b> | <b>11%</b> |
| <b>International</b>       |            |       |                 |             |             |            |            |           |           |            |            |
| Acciona Sa                 | ANA SM     | 70.55 | 4,597           | 22.5        | 19.8        | 1.2        | 1.2        | 3%        | 3%        | 6%         | 6%         |
| Theolia Sa - Regr          | TEO FP     | 0.60  | 127             | n.a.        | n.a.        | 0.0        | 0.0        | n.a.      | n.a.      | -4%        | -1%        |
| Edp Renovaveis Sa          | EDPR PL    | 6.02  | 5,972           | 36.5        | 28.1        | 0.9        | 0.9        | 1%        | 1%        | 3%         | 3%         |
| Greentech Energy Systems   | GES DC     | 7.50  | 122             | 13.4        | 13.4        | 0.5        | 0.5        | 1%        | 1%        | 4%         | 4%         |
| <b>Avg.</b>                |            |       |                 | <b>24.1</b> | <b>20.4</b> | <b>0.7</b> | <b>0.6</b> | <b>1%</b> | <b>2%</b> | <b>2%</b>  | <b>3%</b>  |

Source(s): Bloomberg, prices are as of Oct 12, 2015

**Exhibit 16: Huaneng's fwd PE chart**


Source(s): Bloomberg, ABCI Securities estimates

**Exhibit 17: Huaneng's fwd PB chart**


Source(s): Bloomberg, ABCI Securities estimates

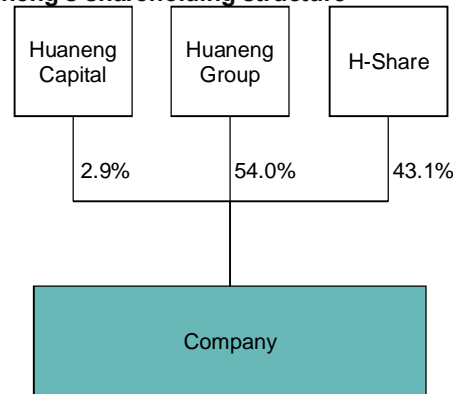
## Company overview

### Background

Huaneng is the sole renewable energy platform and subsidiary of Huaneng Group, the largest power generation company in China in terms of total installed capacity. Huaneng Group is the major shareholder of Huaneng and controls a 54% stake.

Huaneng Renewables has concentrated on wind power generation business since 1999, and its wind power farms are located in most regions in China. Huaneng was first listed on the Main Board of the Hong Kong Stock Exchange by way of a global offering in June 2011.

**Exhibit 18: Huaneng's shareholding structure**



Source(s): The Company, ABCI Securities

### Major assets and business

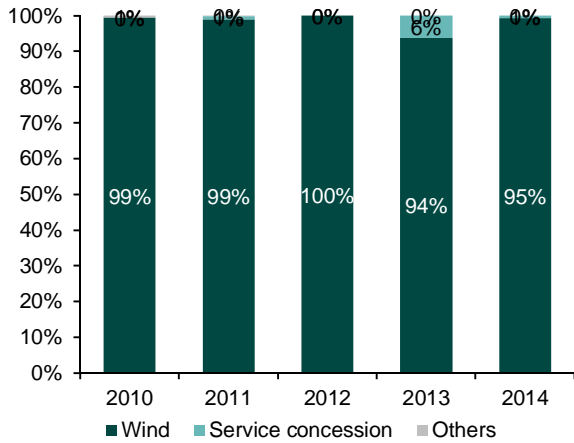
Huaneng currently controls 7,527 MW of wind capacity in China mainly located in Inner Mongolia and northern China, accounting for 8% of national existing wind capacity in 2014. About 23%/18% of the Group's capacity was located in Inner Mongolia/northern China in 2014.

Aside from wind power assets, Huaneng also commenced a solar power operation in recent years. The Group controlled 485MW of installed solar capacity in 2014, a 47% YoY increment from 330MW in 2013. Despite solar power contributed to only a tiny portion to Huaneng's overall power output, the segment could become another major revenue driver to Huaneng in the future.

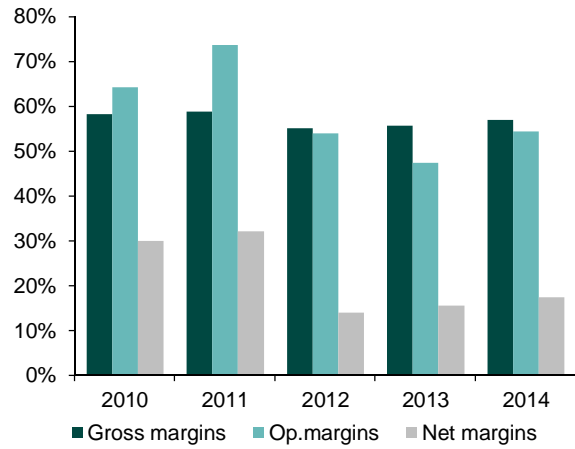
### Revenue breakdown

Huaneng reported revenue of RMB 6.2 bn for 2014, up 4% YoY, much lower than the 47% YoY growth in 2013. The reduced growth was mainly caused by an 8% decrease in wind power utilization hour that fell to 1,875 hours in 2014 from 2,029 hours in 2013.

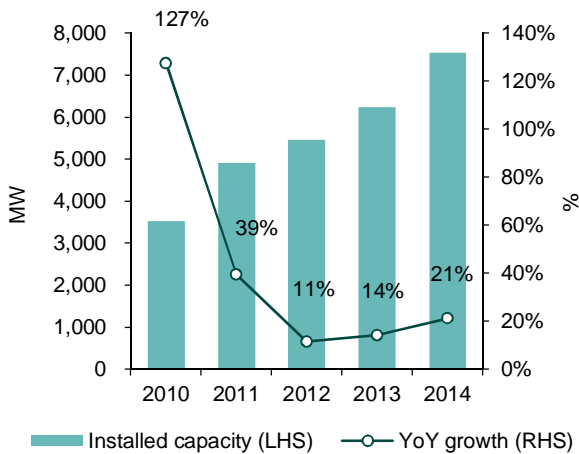
Overall operating margin remained high at the 50% level, driven by the high-margin wind power operation business. In 2014, overall operating margin was 54%, 7ppt higher than that in 2013 on lower operating expense.

**Exhibit 19: Historical revenue breakdown**


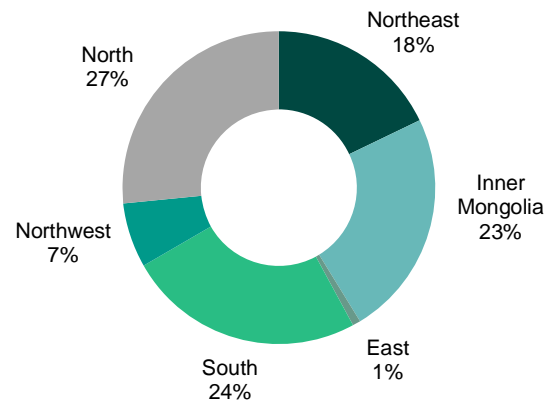
Source(s): Company data, ABCI Securities

**Exhibit 20: Huaneng's historical margins**


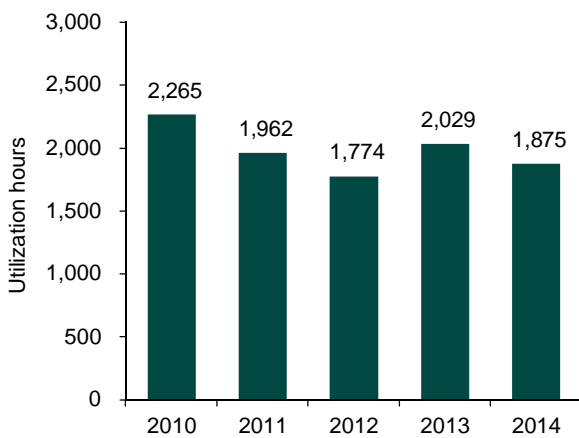
Source(s): Company data, ABCI Securities

**Exhibit 21: Huaneng's installed wind power capacity**


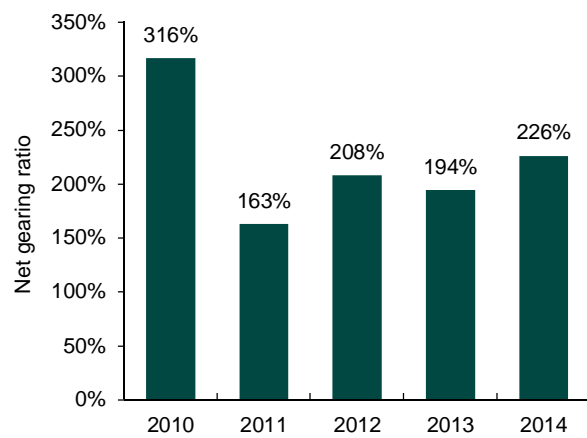
Source(s): Company data, ABCI Securities

**Exhibit 22: Huaneng's wind power capacity geographically distribution**


Source(s): Company data, ABCI Securities

**Exhibit 1: Huaneng's utilization hour trend**


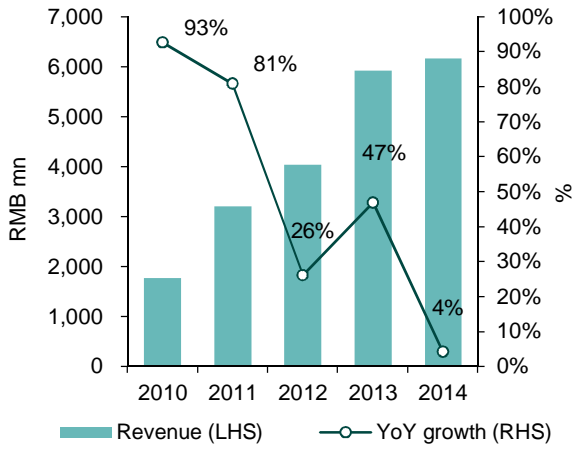
Source(s): Company data, ABCI Securities

**Exhibit 2: Huaneng's net gearing ratio**


Source(s): Company data, ABCI Securities

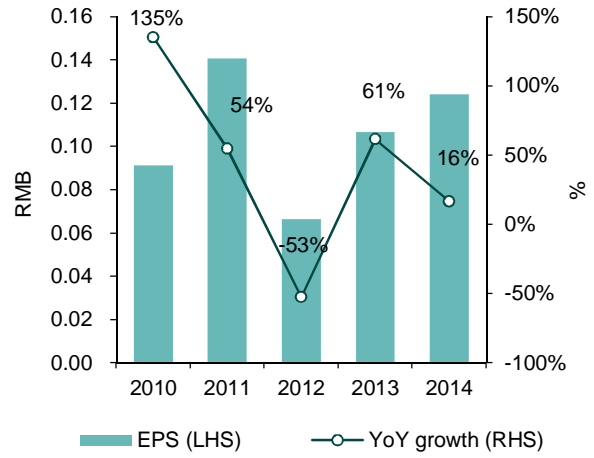


Exhibit 23: Huaneng's overall revenue growth trend



Source(s): Company data, ABCI Securities

Exhibit 24: Huaneng's overall EPS growth trend



Source(s): Company data, ABCI Securities



**Consolidated income statement (2013A-2017E)**

| <b>FY Ended Dec 31 (RMB mn)</b>           | <b>2013A</b>  | <b>2014A</b>  | <b>2015E</b>  | <b>2016E</b>  | <b>2017E</b>  |
|---|---------------|---------------|---------------|---------------|---------------|
| <b>Revenue</b>                            | <b>5,909</b>  | <b>6,151</b>  | <b>8,498</b>  | <b>10,598</b> | <b>12,548</b> |
| Wind power                                | 5,440         | 5,728         | 7,918         | 9,818         | 11,547        |
| Solar power                               | 111           | 386           | 577           | 776           | 998           |
| Other                                     | 358           | 37            | 4             | 4             | 4             |
| <b>COGS</b>                               | <b>-2,621</b> | <b>-2,650</b> | <b>-3,668</b> | <b>-4,366</b> | <b>-5,038</b> |
| <b>Gross profit</b>                       | <b>3,287</b>  | <b>3,501</b>  | <b>4,830</b>  | <b>6,232</b>  | <b>7,511</b>  |
| SG&A                                      | -151          | -187          | -170          | -212          | -251          |
| Net financial income (cost)               | -1,780        | -2,112        | -2,493        | -3,497        | -4,058        |
| Other income and gains                    | -346          | 30            | -135          | -145          | -194          |
| <b>Pre-tax profit</b>                     | <b>1,009</b>  | <b>1,232</b>  | <b>2,032</b>  | <b>2,378</b>  | <b>3,008</b>  |
| Income tax                                | -67           | -86           | -163          | -190          | -241          |
| <b>Net profit</b>                         | <b>942</b>    | <b>1,147</b>  | <b>1,869</b>  | <b>2,188</b>  | <b>2,767</b>  |
| Profit attributable to:                   |               |               |               |               |               |
| Minority interests                        | -29           | -80           | -56           | -66           | -83           |
| <b>Equity shareholders of the Company</b> | <b>913</b>    | <b>1,066</b>  | <b>1,813</b>  | <b>2,122</b>  | <b>2,684</b>  |
| <b>Basic EPS (RMB)</b>                    | <b>0.107</b>  | <b>0.124</b>  | <b>0.186</b>  | <b>0.218</b>  | <b>0.276</b>  |
| <b>DPS (RMB)</b>                          | <b>0.021</b>  | <b>0.023</b>  | <b>0.037</b>  | <b>0.044</b>  | <b>0.055</b>  |

Source(s): Company, ABCI Securities estimates

**Consolidated balance sheet (2013A-2017E)**

| <b>As of Dec 31 (RMB mn)</b>         | <b>2013A</b>  | <b>2014A</b>  | <b>2015E</b>  | <b>2016E</b>   | <b>2017E</b>   |
|--------------------------------------|---------------|---------------|---------------|----------------|----------------|
| <b>Current assets</b>                | <b>9,860</b>  | <b>11,141</b> | <b>13,374</b> | <b>15,364</b>  | <b>16,149</b>  |
| Cash and equivalent                  | 6,270         | 7,786         | 9,634         | 10,700         | 10,628         |
| Pledged and restricted bank deposits | 170           | 2             | 0             | 0              | 0              |
| Trade and bill receivables           | 3,009         | 3,160         | 3,492         | 4,355          | 5,157          |
| Other receivables and prepayments    | 404           | 176           | 233           | 290            | 344            |
| Inventories                          | 4             | 13            | 15            | 18             | 21             |
| Other current assets                 | 3             | 4             | 0             | 0              | 0              |
| <b>Non-current assets</b>            | <b>50,811</b> | <b>62,997</b> | <b>80,025</b> | <b>91,773</b>  | <b>102,294</b> |
| Property, plant and equipment        | 46,300        | 57,873        | 73,841        | 85,342         | 95,646         |
| Investment properties                | 0             | 0             | 0             | 0              | 0              |
| Intangible assets                    | 703           | 696           | 719           | 742            | 767            |
| Investment in JV and associates      | 82            | 112           | 81            | 81             | 81             |
| Deferred tax assets                  | 6             | 5             | 5             | 5              | 5              |
| Other non-current assets             | 3,720         | 4,310         | 5,379         | 5,604          | 5,796          |
| <b>Total assets</b>                  | <b>60,671</b> | <b>74,138</b> | <b>93,399</b> | <b>107,137</b> | <b>118,443</b> |
| <b>Current liabilities</b>           | <b>19,344</b> | <b>25,741</b> | <b>32,921</b> | <b>37,424</b>  | <b>41,872</b>  |
| Trade and bill payables              | 0             | 0             | 0             | 0              | 0              |
| Other payables                       | 8,512         | 8,001         | 8,814         | 9,511          | 11,615         |
| Short term borrowings                | 10,446        | 17,306        | 24,107        | 27,913         | 30,256         |
| Other current liabilities            | 386           | 434           | 0             | 0              | 0              |
| <b>Non-current liabilities</b>       | <b>26,466</b> | <b>31,512</b> | <b>41,700</b> | <b>48,672</b>  | <b>53,300</b>  |
| Deferred tax liabilities             | 19            | 19            | 19            | 19             | 19             |
| Long-term borrowings                 | 23,213        | 26,842        | 37,390        | 43,294         | 46,928         |
| Other non-current liabilities        | 3,235         | 4,651         | 4,291         | 5,359          | 6,353          |
| <b>Total liabilities</b>             | <b>45,810</b> | <b>57,253</b> | <b>74,621</b> | <b>86,096</b>  | <b>95,171</b>  |
| <b>Minority interests</b>            | <b>836</b>    | <b>784</b>    | <b>840</b>    | <b>906</b>     | <b>989</b>     |
| <b>Shareholders' equities</b>        | <b>14,025</b> | <b>16,101</b> | <b>17,938</b> | <b>20,136</b>  | <b>22,283</b>  |

Source(s): Company, ABCI Securities estimates



**Consolidated cash flow statement (2013A-2017E)**

| <b>FY ended Dec 31 (RMB mn)</b>         | <b>2013A</b>  | <b>2014A</b>   | <b>2015E</b>   | <b>2016E</b>   | <b>2017E</b>   |
|---|---------------|----------------|----------------|----------------|----------------|
| <b>Profit before tax</b>                | <b>942</b>    | <b>1,147</b>   | <b>1,869</b>   | <b>2,188</b>   | <b>2,767</b>   |
| Change in depreciation and amortization | 1,945         | 2,254          | 3,263          | 3,847          | 4,407          |
| Change in working capital               | 1,116         | 689            | -1,108         | -366           | 1,118          |
| Net financial cost (income)             | 1,860         | 2,088          | 2,493          | 3,497          | 4,058          |
| Income tax paid                         | -68           | -77            | -163           | -190           | -241           |
| Net interest received                   | 67            | 86             | 0              | 0              | 0              |
| Others                                  | 151           | -62            | 0              | 0              | 0              |
| <b>CF Operating</b>                     | <b>6,014</b>  | <b>6,125</b>   | <b>6,355</b>   | <b>8,976</b>   | <b>12,110</b>  |
| Capex                                   | -7,327        | -13,394        | -19,200        | -15,316        | -14,677        |
| Increase in intangible assets           | 0             | 0              | -53            | -56            | -58            |
| Others                                  | 524           | 433            | 156            | 193            | 214            |
| <b>CF Investing</b>                     | <b>-6,803</b> | <b>-12,961</b> | <b>-19,097</b> | <b>-15,179</b> | <b>-14,521</b> |
| Net Capital raise                       | 1,246         | 1,358          | 0              | 0              | 0              |
| Net debt financing                      | 2,835         | 10,489         | 17,349         | 9,710          | 5,977          |
| Dividend payout                         | -266          | -213           | -363           | -424           | -537           |
| Interest paid                           | -1,890        | -2,228         | -2,189         | -2,649         | -3,690         |
| Others                                  | -504          | -517           | -208           | 633            | 588            |
| <b>CF Financing</b>                     | <b>1,422</b>  | <b>8,889</b>   | <b>14,589</b>  | <b>7,269</b>   | <b>2,338</b>   |
| <b>Net change in cash</b>               | <b>632</b>    | <b>2,053</b>   | <b>1,848</b>   | <b>1,066</b>   | <b>-73</b>     |
| Cash at the beginning                   | 3,769         | 4,322          | 7,786          | 9,634          | 10,700         |
| Adjustment (Time deposit & FX effect)   | 1,868         | 1,412          | 0              | 0              | 0              |
| <b>Cash at the end</b>                  | <b>6,270</b>  | <b>7,786</b>   | <b>9,634</b>   | <b>10,700</b>  | <b>10,628</b>  |

Source(s): Company, ABCI Securities estimates

**Key Ratio (2013A-2017E)**

| <b>FY ended Dec 31 (RMB mn)</b>           | <b>2013A</b> | <b>2014A</b> | <b>2015E</b> | <b>2016E</b> | <b>2017E</b> |
|---|--------------|--------------|--------------|--------------|--------------|
| <b>Sales mixed (%)</b>                    |              |              |              |              |              |
| Wind power                                | 92.06        | 93.12        | 93.17        | 92.64        | 92.02        |
| Solar power                               | 1.88         | 6.28         | 6.79         | 7.33         | 7.95         |
| Other                                     | 6.05         | 0.60         | 0.04         | 0.03         | 0.03         |
| <b>Total</b>                              | <b>100</b>   | <b>100</b>   | <b>100</b>   | <b>100</b>   | <b>100</b>   |
| <b>Profit &amp; loss ratios (%)</b>       |              |              |              |              |              |
| Gross margin                              | 55.64        | 56.92        | 56.84        | 58.81        | 59.86        |
| Operating profit margin                   | 47.27        | 54.39        | 53.25        | 55.44        | 56.31        |
| Pre-tax margin                            | 17.08        | 20.04        | 23.91        | 22.44        | 23.97        |
| Net profit margin                         | 15.95        | 18.64        | 22.00        | 20.64        | 22.05        |
| Selling & administrative expenses/revenue | 2.56         | 3.04         | 2.00         | 2.00         | 2.00         |
| Effective tax rate                        | 6.65         | 6.95         | 8.00         | 8.00         | 8.00         |
| <b>Growth (%)</b>                         |              |              |              |              |              |
| Revenue                                   | 46.73        | 4.10         | 38.16        | 24.70        | 18.41        |
| Gross profit                              | 48.52        | 6.50         | 37.96        | 29.03        | 20.52        |
| Operating profit                          | 28.56        | 19.80        | 35.25        | 29.84        | 20.27        |
| Net profit                                | 56.77        | 21.69        | 63.02        | 17.03        | 26.48        |
| <b>Balance sheet ratios</b>               |              |              |              |              |              |
| Current ratio (x)                         | 0.51         | 0.43         | 0.41         | 0.41         | 0.39         |
| Quick ratio (x)                           | 0.49         | 0.43         | 0.40         | 0.40         | 0.38         |
| Cash ratio (x)                            | 0.33         | 0.30         | 0.29         | 0.29         | 0.25         |
| Trade and bill receivables days           | 179.64       | 187.53       | 150.00       | 150.00       | 150.00       |
| Trade and bill payables turnover days     | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| Inventory turnover days                   | 0.59         | 1.81         | 1.50         | 1.50         | 1.50         |
| Total debt / equity ratio (%)             | 239.99       | 274.19       | 342.84       | 353.64       | 346.38       |
| Net debt / equity ratio (%)               | 194.08       | 225.82       | 289.13       | 300.50       | 298.69       |
| <b>Returns (%)</b>                        |              |              |              |              |              |
| ROAA                                      | 1.6          | 1.6          | 2.2          | 2.1          | 2.4          |
| ROAE                                      | 7.1          | 7.1          | 10.7         | 11.1         | 12.7         |
| Payout ratio                              | 92.06        | 93.12        | 93.17        | 92.64        | 92.02        |

Source(s): Company, ABCI Securities estimates





October 13, 2015  
Company Report  
Rating: HOLD  
TP: HK\$ 1.15

|                         |       |
|-------------------------|-------|
| H-Share price (HK\$)    | 1.07  |
| Est. share price return | 7.48% |
| Est. dividend yield     | 1.19% |
| Est. total return       | 8.66% |

Analyst: Kelvin Ng  
Tel: (852) 2147 8869  
Email: kelvingng@abci.com.hk

**Key Data**

|   |           |
|---|-----------|
| Market share (HK\$m)                      | 7,783     |
| 3-mth avg. daily turnover (HK\$ mn)       | 3.0       |
| 52-week high/low (HK\$)                   | 1.46/0.84 |
| Issued shares (mn)                        | 7,274     |
| Major shareholder(s) (%):<br>Datang Group | 57.40     |

Source(s): Company, Bloomberg, ABCI Securities

**FY14 Revenue breakdown (%)**

|                      |      |
|----------------------|------|
| Sales of electricity | 98.9 |
| Others               | 1.1  |

Source(s): Company, ABCI Securities

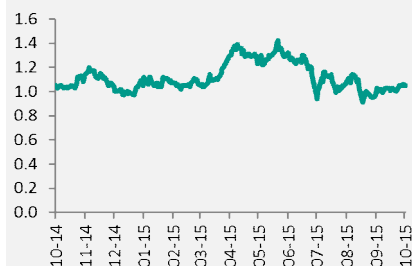
**Share performance (%)**

|       | Absolute | Relative* |
|-------|----------|-----------|
| 1-mth | 4.90%    | -0.80%    |
| 3-mth | -7.76%   | 1.52%     |
| 6-mth | -21.90%  | -4.37%    |

\*Relative to HSI

Source(s): Bloomberg, ABCI Securities

**1-Year stock performance**



Source(s): Bloomberg, ABCI Securities

## China Datang Renewable (1798 HK)

### Highly leverage as double-edged sword

- Datang Renewable has the largest exposure in northern China; to improve utilization hour and reduce power curtailment, the Group would need to expand in southern regions
- High net gearing increases likelihood of fundraising activities
- Low interest coverage ratio increases volatility of the Group's earnings and results in frequent earnings shock.
- Based on our DCF model with a 6%WACC, we set our TP at HK\$1.15, which represents 17x 2015E P/E and 0.6x 2014E P/B. Recommend **HOLD**

**High exposure in northern China player means that it needs to expand in the south.** Datang's installed capacity in Inner Mongolia and northeast China in 2014 accounted for 66% of its total capacity. Given the high wind power curtailment rate in these regions, the Group would need to focus on expanding its capacity in southern China to improve overall utilization rate and profitability.

**A highly sensitive play.** Datang has a relatively small wind capacity equivalent to 44% of the market leader, Longyuan, in 2014. A small capacity increment would help boost Datang's earnings given its low capacity base. In addition, its high gearing ratio makes its earnings highly sensitive to changes in utilization hour and capacity.

**High net gearing ratio prompts fundraising concern.** Datang's net gearing ratio was at 354% at end-2014, compared to Longyuan's 203% and Huaneng Renewables' 226%. Given the Group's wind farm construction is usually 80% funded by debt and 20% by cash, the high gearing should prompt fundraising concern.

**Low interest coverage ratio increases earnings volatility.** Due to Datang's high net gearing ratio and negative free cash flow, its interest coverage ratio decreased from 1.91x in 2010 to 0.94x in 2014, suggesting that its earnings is highly sensitive to changes in interest rate. The low interest coverage ratio implies that its net income is likely to swing from profit to loss (and vice versa) and results in frequent earnings shock.

**Initiate HOLD with TP at HK\$1.15.** We value Datang with DCF methodology by 6% WACC and our TP at HK\$1.15 equivalent to 17x/31x 2015/16E P/E, 0.6x/0.6x 2015/16E P/B. We see Datang's high net gearing ratio and all-in capacity cost should be key overhangs to its future earnings despite its seemingly low valuation at 0.6x 2015E P/B. Recommend HOLD.

**Risk factors:** (1) Potential fundraising activities; (2) Slower-than-expected capacity growth; (3) Policy risks; (4) Reduced power tariff.

**Results and Valuation**

| FY ended Dec 31     | 2013A | 2014A  | 2015E | 2016E | 2017E  |
|---------------------|-------|--------|-------|-------|--------|
| Revenue (RMB mn)    | 5,630 | 5,186  | 6,076 | 7,139 | 8,061  |
| Chg (% YoY)         | 28.9  | -7.9   | 17.2  | 17.5  | 12.9   |
| Net Income (RMB mn) | 307   | -128   | 476   | 267   | -234   |
| Chg (% YoY)         | 64.8  | n.a.   | n.a.  | -44.0 | n.a.   |
| EBITDA (RMB mn)     | 4,669 | 4,534  | 5,312 | 6,244 | 7,028  |
| Chg (% YoY)         | 17.7  | -2.9   | 17.1  | 17.6  | 12.6   |
| EPS (RMB)           | 0.033 | -0.021 | 0.052 | 0.029 | -0.026 |
| Chg (% YoY)         | 111.0 | n.a.   | n.a.  | -44.0 | n.a.   |
| BVPS (RMB)          | 1.277 | 1.498  | 1.467 | 1.490 | 1.464  |
| Chg (% YoY)         | 5.4   | 17.3   | -2.1  | 1.6   | -1.7   |
| P/E (x)             | 27.10 | n.a.   | 16.86 | 30.10 | n.a.   |
| P/B (x)             | 0.69  | 0.59   | 0.60  | 0.59  | 0.60   |
| ROE (%)             | 2.55  | -1.37  | 3.56  | 1.96  | -1.76  |
| ROA (%)             | 0.42  | -0.25  | 0.48  | 0.21  | -0.15  |
| DPS (RMB)           | 0.003 | 0.000  | 0.010 | 0.006 | 0.000  |
| Yield (%)           | 0.34  | 0.00   | 1.19  | 0.66  | 0.00   |
| Net gearing* (%)    | 410.9 | 354.5  | 403.9 | 465.7 | 544.1  |

\*Net gearing=Net debt/Total equity

Source(s): Company, ABCI Securities estimates

## Key positives

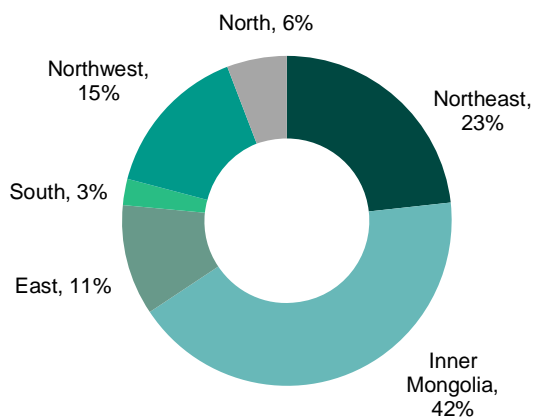
### High exposure in northern China player means that it needs to expand in the south

Datang's installed capacity in Inner Mongolia and northeast China in 2014 accounted for 66% of its total capacity. Given the high wind power curtailment rate in these regions, the Group would need to focus on expanding its capacity in in southern China to improve overall utilization rate and profitability.

### A highly sensitive play

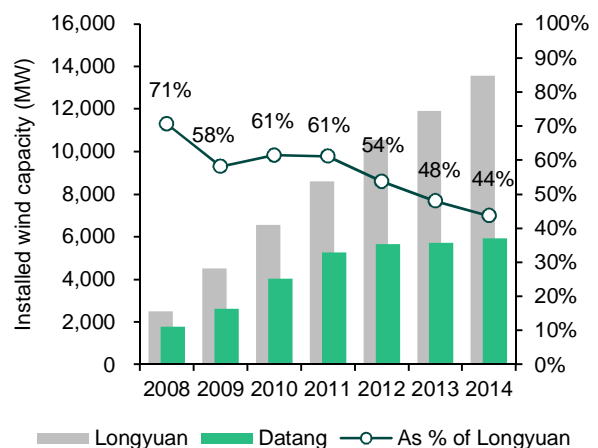
A company with low capacity base and high leverage should benefit when situation improves. Datang has a relatively small wind capacity equivalent to 44% of the market leader, Longyuan, in 2014. A small capacity increment would help boost Datang's earnings given its low capacity base. In addition, its high gearing ratio makes its earnings highly sensitive to changes in utilization hour and capacity. We forecast that for every 1% increase in utilization hour, 2015E/156E earnings will increase by 9%/19%; a 1% increase in installed capacity should drive up 2015E/16E earnings by 4%/9%. Nonetheless, we believe this highly leveraged player will be the largest beneficiary of improvements in wind power curtailment or any positive policy in the future.

**Exhibit 1: Datang's capacity breakdown in 2014 shows that most capacity is located in Inner Mongolia and northeast China**



Source(s): Company data, ABCI Securities

**Exhibit 2: Datang's installed wind power capacity is equivalent to 44% of Longyuan's**



Source(s): Company data, ABCI Securities

## Major concerns

### High net gearing ratio should prompt fundraising concern

Datang's net gearing ratio was 354% by end-2014, compared to Longyuan's 203% and Huaneng Renewables' 226%. As the Group's wind facility construction is usually 80% funded by debt and 20% by cash, the high net gearing ratio at present implies a strong fundraising need. The high debt ratio resulted in higher financial burden, with interest coverage ratio declining from 1.88x in 2007 to 0.94x in 2014. This indicates interest rate changes would have a strong impact on earnings. We estimate for every 25 bp increase in interest rate, 2015E/16E earnings will reduce by 11.8%.

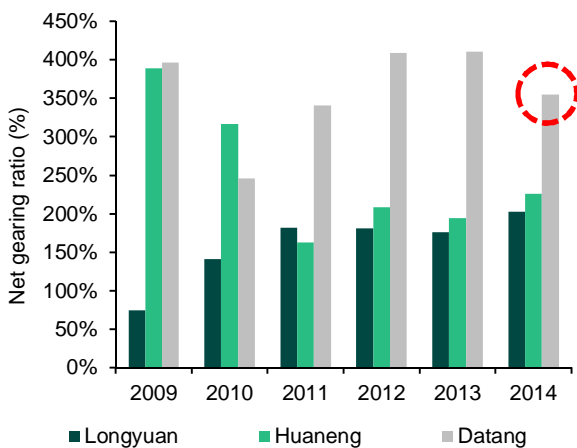
### Low interest coverage ratio increases earnings volatility

Due to Datang's high net gearing ratio and negative free cash flow, its interest coverage ratio decreased from 1.91x in 2010 to 0.94x in 2014, suggesting that its earnings is highly sensitive to changes in interest rate. The low interest coverage ratio implies that its net income is likely to swing from profit to loss (and vice versa) and results in frequent earnings shock.

### Declining power tariff should hit Datang the hardest

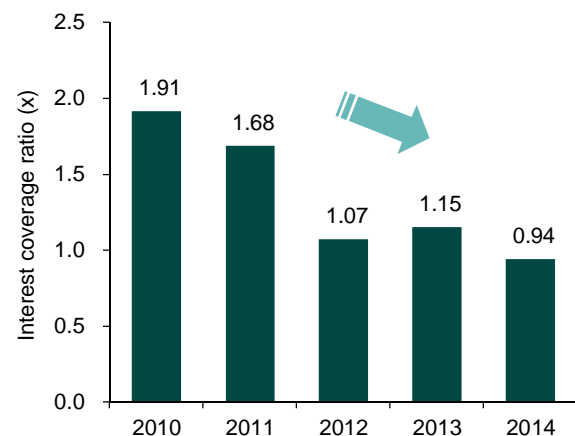
China's wind power tariff would maintain a downtrend going forward due to: 1). A cheaper wind power tariff should encourage more users to switch from traditional coal-fire energy to wind energy; 2). China would like to lighten the financial burden of industrial companies to boost the weakening industrial production activities. Given Datang's thinnest net profit margin among wind power operators in our coverage universe, it should suffer the most from the declining wind power tariff. Based on our estimates, for every 1% decline in wind power tariff, Datang's 2015/16E earnings would drop by 10% and 21%.

**Exhibit 3: Datang has the highest net gearing ratio among peers**



Source(s): Company data, ABCI Securities

**Exhibit 4: Low interest coverage ratio suggests Datang's earnings are highly sensitive to interest rate change**



Source(s): Company data, ABCI Securities

## Future earnings outlook

We expect Datang's 2015E net income to reach RMB 381 mn (vs. RMB150 mn net loss in 2014) on higher utilization hour that rises from 1,803 hours in 2014 to 1,944 hours in 2015E.

### Earnings growth

Datang's future earnings growth should be volatile, swinging between profit and loss due to its thin margin. Its future earnings growth should be highly dependent on 1) China's wind resources improvement; 2) wind power capacity growth. With China's improved wind resources, Datang's 2015/16E net income would reach RMB 381mn and RMB 213mn. The Group's high unit all-in capacity cost and net gearing, however, would increase its financial burden and therefore we project a net loss in 2017E.

### Capacity growth

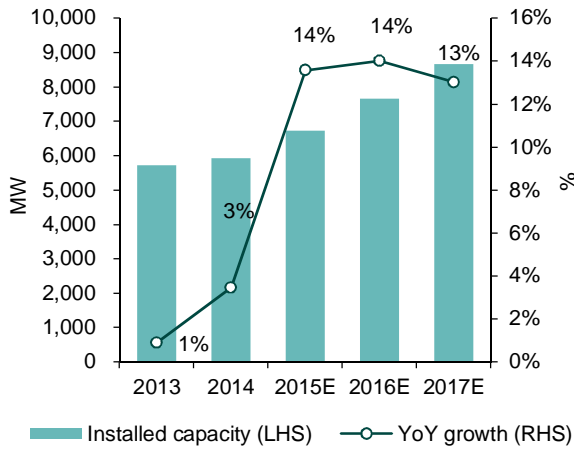
Based on the management's aggressive expansion plan announced in 1H15 results analyst meeting, we project the installed capacity growth to be 14%/14%/13% YoY in 2015-17E. We expect a high-single digit growth for its capacity due to the restraints imposed by its high net gearing ratio. In addition, Datang's unit all-in capacity cost has been trending up and this would hinder its future capacity growth. Despite management guided an optimistic new capacity increment of 1.1GW in each year going forward, we believe this aggressive capacity expansion plan would only last for 3 years, and future capacity growth should return to the high-single digit level.

### Net gearing ratio

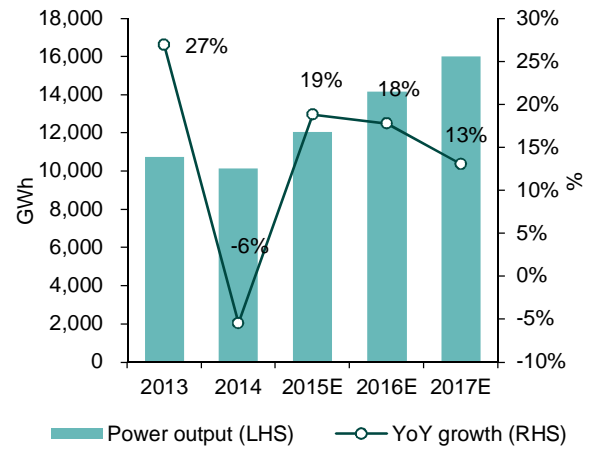
With Datang's negative free cash flow and high all-in capacity cost, we believe its gearing ratio is unlikely to decrease in the short term. Management has confirmed the Group will continue to expand capacity. Hence, we believe the gearing ratio will remain at the 300%-400% level.

### Dividend payout ratio

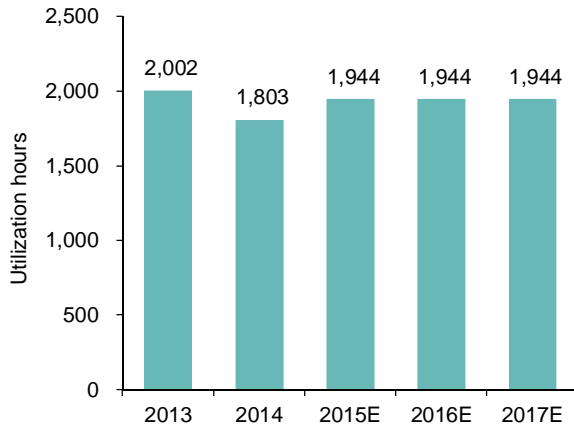
The Group maintained a stable average payout ratio of 33% from 2008-11. Payout ratio was 149% in 2012 to maintain a stable dividend to shareholders in the trough period. Datang guided that have it will maintain a stable level of dividends without providing details on its long-term payout ratio. Given the capital-intensive nature of wind power, future capex is likely to remain high. For profitable years, we believe the payout ratio would be ~20%.

**Exhibit 1: Datang's wind capacity outlook**


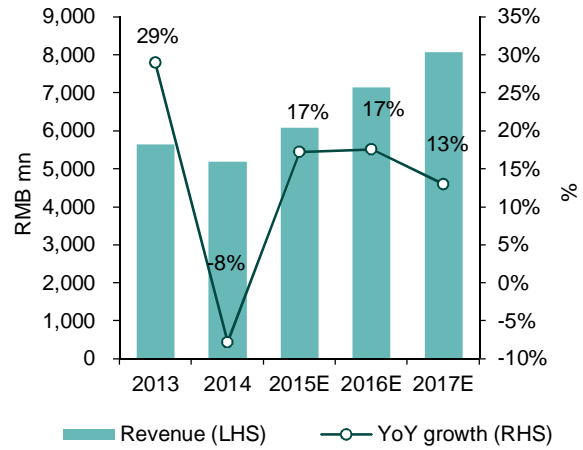
Source(s): ABCI Securities estimates

**Exhibit 2: Datang's gross wind power output**


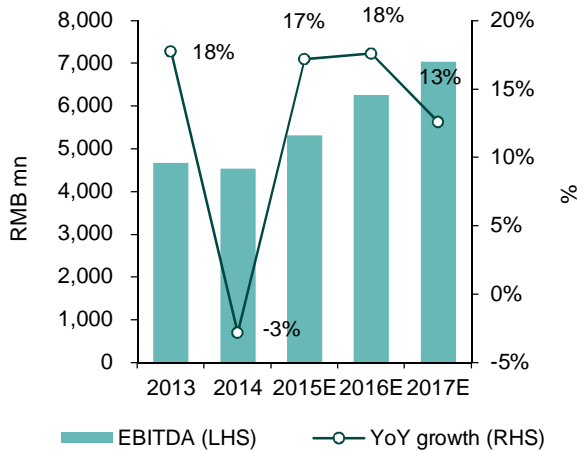
Source(s): ABCI Securities estimates

**Exhibit 5: Datang's utilization hours outlook**


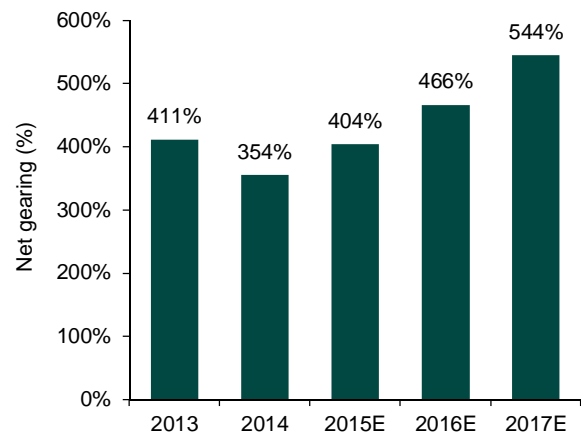
Source(s): ABCI Securities estimates

**Exhibit 6: Datang's revenue outlook**


Source(s): ABCI Securities estimates

**Exhibit 7: Datang's EBITDA outlook**


Source(s): ABCI Securities estimates

**Exhibit 8: Datang's net gearing ratio**


Source(s): ABCI Securities estimates

## Valuation

### Initiate with HOLD; TP at HK\$1.15

We believe the DCF method is appropriate for valuing companies in the wind sector as it can capture the time value of future cash inflows.

We initiate coverage on Datang with a **HOLD** rating. Our DCF-derived TP of HK\$1.15 is based on 6% WACC. Our TP is equivalent to 17x/31x 2015/16E P/E and 0.6x/0.6x 2015/16E P/B. While our P/E valuation may seem demanding, its P/B valuation is still below book and approaching its historical low of 0.58x in Sep 2012. Thus, we believe its current valuation is justified. We believe any improvement in Datang's operation (increased utilization hour, improvement in wind resources, decline in interest rate decline etc.) should elevate earnings and hence share price. However, investors should be aware of its high net gearing ratio and all-in capacity cost, as these increase the need for fundraising.

### Share price catalysts

As Datang is a highly leveraged operator with most its wind farms locating in Inner Mongolia, catalysts for the Group's share price would be 1) power grid capacity improvement in Inner Mongolia; 2) Expansion in southern/coastal regions; 3) Better-than-expected quarterly operation data.

**Exhibit 9: Datang's DCF calculation (2015E-2024E)**

| Datang's DCF calculation     |             |
|------------------------------|-------------|
| Perpetual growth rate        | 1%          |
| WACC                         | 6%          |
| Terminal value               | 93,076      |
| PV of terminal value         | 51,025      |
| Cum PV of CF stream          | 1,868       |
| Enterprise Value             | 52,893      |
| Less debt                    | (60,300)    |
| Add cash on hand             | 17,128      |
| Less: MI                     | (2,825)     |
| Equity Value                 | 6,896       |
| Shares o/s                   | 7,287       |
| <b>Value per share(HK\$)</b> | <b>1.15</b> |

Source(s): The Company, ABCI Securities estimates

**Exhibit 10: Datang's WACC calculation (2015E-2024E)**

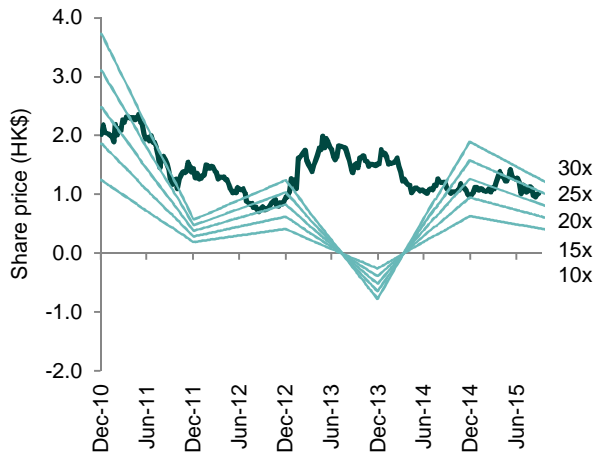
|                                | Assumptions |
|--------------------------------|-------------|
| Risk Free Rate of Return       | 3.4%        |
| Long Term Cost of Debt         | 5.0%        |
| Equity Risk Premium            | 12.8%       |
| Beta                           | 0.98        |
| Tax Rate                       | 25.0%       |
| Target Debt to Total Capital   | 80.0%       |
| Target Equity to Total Capital | 20.0%       |
| Cost of Equity                 | 16.0%       |
| <b>WACC</b>                    | <b>6.2%</b> |

Source(s): The Company, ABCI Securities estimates

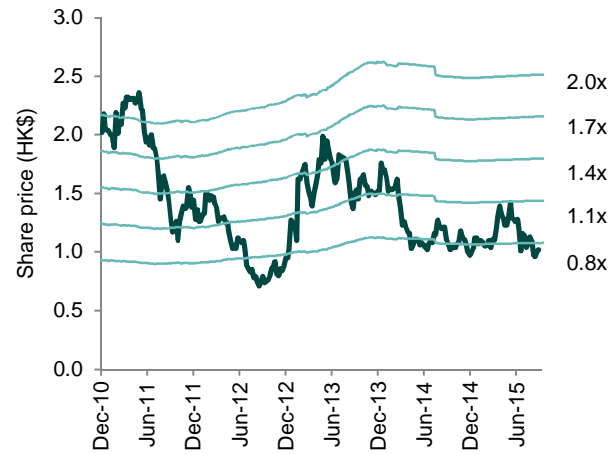
**Exhibit 11: Peer comparison**

| Name                       | Stock code | Price | Mkt Cap (USDmn) | PER (x)     |             | PBR (x)    |            | Dvd Yield |           | ROE        |            |
|----------------------------|------------|-------|-----------------|-------------|-------------|------------|------------|-----------|-----------|------------|------------|
|                            |            |       |                 | FY15E       | FY16E       | FY15E      | FY16E      | FY15E     | FY16E     | FY15E      | FY16E      |
| <b>HK &amp; China</b>      |            |       |                 |             |             |            |            |           |           |            |            |
| China Longyuan             | 916 HK     | 8.75  | 9,073           | 14.9        | 12.7        | 1.6        | 1.4        | 1%        | 2%        | 11%        | 12%        |
| Huaneng Renewables         | 958 HK     | 3.07  | 3,853           | 13.0        | 10.3        | 1.4        | 1.2        | 1%        | 2%        | 11%        | 12%        |
| Datang Renewable           | 1798 HK    | 1.07  | 1,004           | 17.1        | 11.6        | 0.6        | 0.6        | 1%        | 1%        | 3%         | 5%         |
| Huadian Fuxin Energy       | 816 HK     | 3.13  | 3,396           | 9.0         | 7.2         | 1.2        | 1.1        | 2%        | 3%        | 14%        | 15%        |
| Beijing Jingneng Clean     | 579 HK     | 2.65  | 2,349           | 7.7         | 6.7         | 1.0        | 0.9        | 3%        | 4%        | 13%        | 15%        |
| China Suntien Green Energy | 956 HK     | 1.55  | 743             | 11.1        | 8.8         | 0.6        | 0.6        | 3%        | 4%        | 5%         | 7%         |
| <b>Avg.</b>                |            |       |                 | <b>12.1</b> | <b>9.6</b>  | <b>1.1</b> | <b>1.0</b> | <b>2%</b> | <b>2%</b> | <b>10%</b> | <b>11%</b> |
| <b>International</b>       |            |       |                 |             |             |            |            |           |           |            |            |
| Acciona Sa                 | ANA SM     | 70.55 | 4,597           | 22.5        | 19.8        | 1.2        | 1.2        | 3%        | 3%        | 6%         | 6%         |
| Theolia Sa - Regr          | TEO FP     | 0.60  | 127             | n.a.        | n.a.        | 0.0        | 0.0        | n.a.      | n.a.      | -4%        | -1%        |
| Edp Renovaveis Sa          | EDPR PL    | 6.02  | 5,972           | 36.5        | 28.1        | 0.9        | 0.9        | 1%        | 1%        | 3%         | 3%         |
| Greentech Energy Systems   | GES DC     | 7.50  | 122             | 13.4        | 13.4        | 0.5        | 0.5        | 1%        | 1%        | 4%         | 4%         |
| <b>Avg.</b>                |            |       |                 | <b>24.1</b> | <b>20.4</b> | <b>0.7</b> | <b>0.6</b> | <b>1%</b> | <b>2%</b> | <b>2%</b>  | <b>3%</b>  |

Source(s): Bloomberg, prices are as of Oct 12, 2015

**Exhibit 12: Datang's fwd PE chart**


Source(s): Bloomberg, ABCI Securities estimates

**Exhibit 13: Datang's fwd PB chart**


Source(s): Bloomberg, ABCI Securities estimates

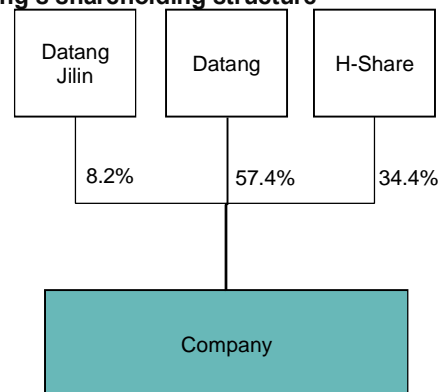
## Company overview

### Background

Datang is the subsidiary and renewable energy arm of Datang Group, which is the fifth largest power generation company in China in terms of total installed capacity.

Datang Group is the company's major shareholder and currently controls a 57% stake. Datang is the largest wind power operator in Inner Mongolia. The company was first listed on the main board of the Hong Kong Stock Exchange by way of a global offering in Dec 2010.

**Exhibit 14: Datang's shareholding structure**



Source(s): The Company, ABCI Securities

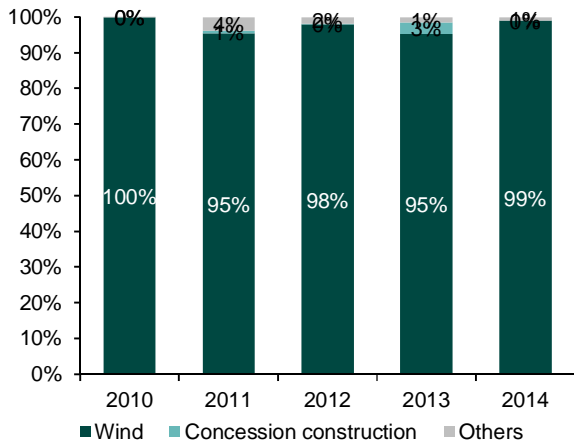
### Major assets and business

Datang has been concentrating in wind power operation business and currently controls 5,916 MW of installed wind capacity in China, which accounted for 6% of China's existing wind capacity in 2014. Inner Mongolia/northeast China took up 42%/23% of the Group's 2014 wind power capacity.

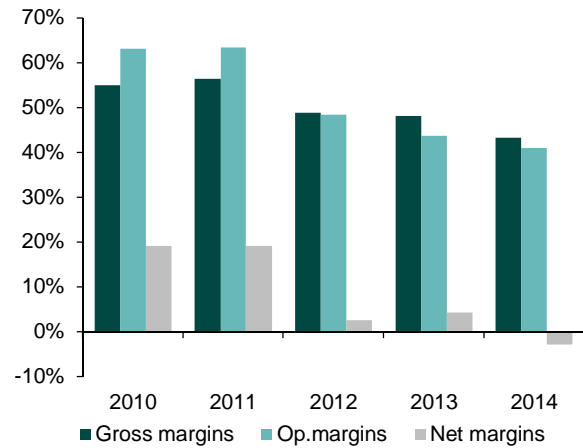
### Revenue breakdown

Datang reported a revenue of RMB5.2 bn for 2014, down 8% YoY compared to the 29% YoY increase in 2013, mainly due a 10% YoY decrease in wind power utilization hour to 1,803 hours in 2014 from 2,002 hours in 2013

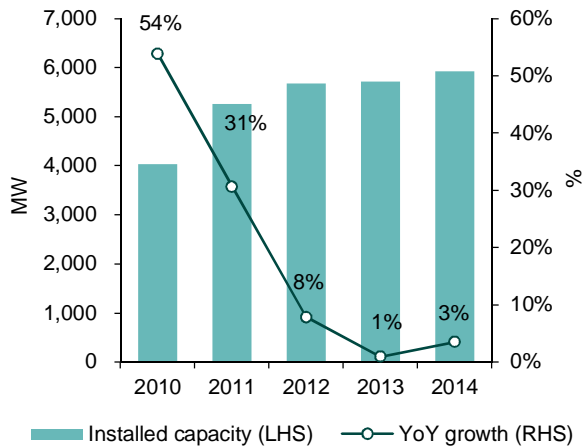


**Exhibit 15: Historical revenue breakdown**


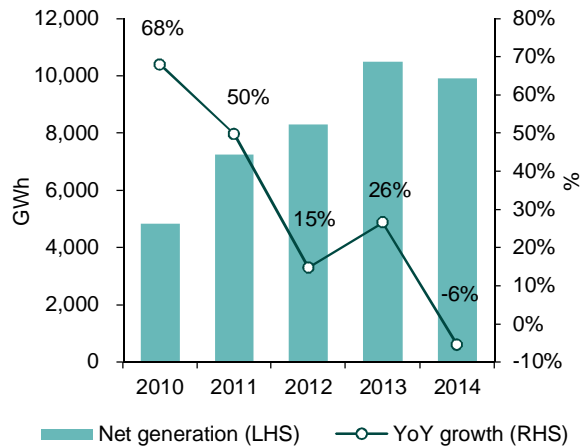
Source(s): Company data, ABCI Securities

**Exhibit 16: Datang's historical margins**


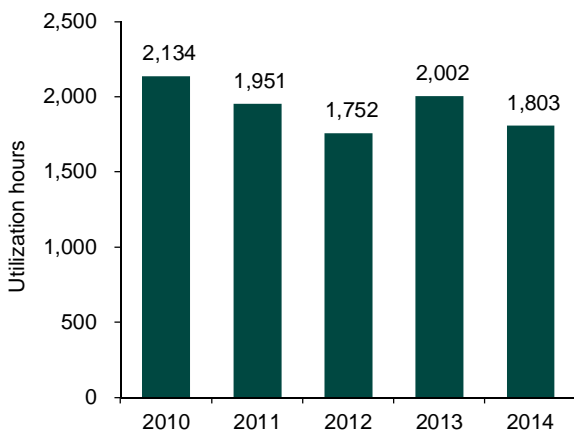
Source(s): Company data, ABCI Securities

**Exhibit 17: Datang's installed wind power capacity**


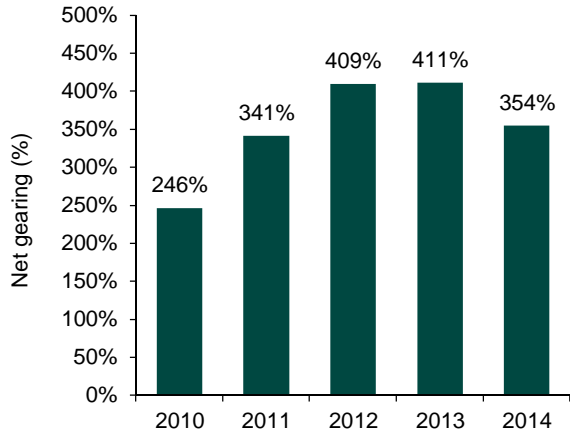
Source(s): Company data, ABCI Securities

**Exhibit 18: Datang's net wind power generation**


Source(s): Company data, ABCI Securities

**Exhibit 19: Datang's utilization hour trend**


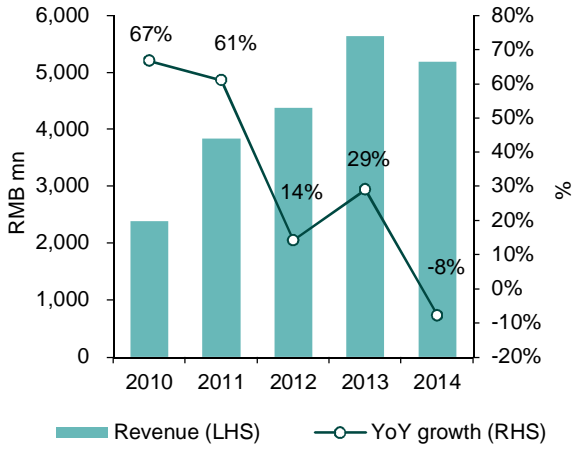
Source(s): Company data, ABCI Securities

**Exhibit 20: Datang's net gearing ratio**


Source(s): Company data, ABCI Securities

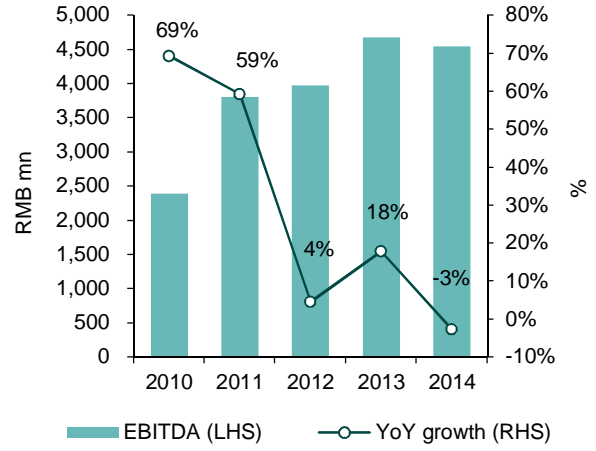


Exhibit 21: Datang's overall revenue growth trend



Source(s): Company data, ABCI Securities

Exhibit 22: Datang's overall EBITDA growth trend



Source(s): Company data, ABCI Securities



**Consolidated income statement (2013A-2017E)**

| <b>FY Ended Dec 31 (RMB mn)</b>           | <b>2013A</b>  | <b>2014A</b>  | <b>2015E</b>  | <b>2016E</b>  | <b>2017E</b>  |
|---|---------------|---------------|---------------|---------------|---------------|
| <b>Revenue</b>                            | <b>5,630</b>  | <b>5,186</b>  | <b>6,076</b>  | <b>7,139</b>  | <b>8,061</b>  |
| Wind                                      | 5,364         | 5,132         | 5,941         | 6,993         | 7,902         |
| Concession construction                   | 185           | 8             | 0             | 0             | 0             |
| Others                                    | 80            | 47            | 135           | 145           | 158           |
| <b>COGS</b>                               | <b>-2,924</b> | <b>-2,941</b> | <b>-3,276</b> | <b>-3,769</b> | <b>-4,254</b> |
| <b>Gross profit</b>                       | <b>2,706</b>  | <b>2,245</b>  | <b>2,800</b>  | <b>3,369</b>  | <b>3,807</b>  |
| SG&A                                      | 0             | 0             | 0             | 0             | 0             |
| Net financial income (cost)               | -2,108        | -2,234        | -2,034        | -2,827        | -3,822        |
| Other income and gains                    | -238          | -72           | -185          | -218          | -270          |
| <b>Pre-tax profit</b>                     | <b>360</b>    | <b>-62</b>    | <b>581</b>    | <b>325</b>    | <b>-286</b>   |
| Income tax                                | -53           | -66           | -104          | -59           | 51            |
| <b>Net profit</b>                         | <b>307</b>    | <b>-128</b>   | <b>476</b>    | <b>267</b>    | <b>-234</b>   |
| Profit attributable to:                   |               |               |               |               |               |
| Minority interests                        | -71           | -23           | -95           | -53           | 47            |
| <b>Equity shareholders of the Company</b> | <b>237</b>    | <b>-150</b>   | <b>381</b>    | <b>213</b>    | <b>-188</b>   |
| <b>Basic EPS (RMB)</b>                    | <b>0.033</b>  | <b>-0.021</b> | <b>0.052</b>  | <b>0.029</b>  | <b>-0.026</b> |
| <b>DPS (RMB)</b>                          | <b>0.003</b>  | <b>0.000</b>  | <b>0.010</b>  | <b>0.006</b>  | <b>0.000</b>  |

Source(s): Company, ABCI Securities estimates

**Consolidated balance sheet (2013A-2017E)**

| <b>As of Dec 31 (RMB mn)</b>         | <b>2013A</b>  | <b>2014A</b>  | <b>2015E</b>  | <b>2016E</b>   | <b>2017E</b>   |
|--------------------------------------|---------------|---------------|---------------|----------------|----------------|
| <b>Current assets</b>                | <b>5,912</b>  | <b>6,683</b>  | <b>20,835</b> | <b>37,537</b>  | <b>52,687</b>  |
| Cash and equivalent                  | 1,001         | 2,190         | 17,128        | 33,183         | 47,770         |
| Pledged and restricted bank deposits | 0             | 350           | 0             | 0              | 0              |
| Trade and bill receivables           | 3,805         | 3,279         | 2,830         | 3,325          | 3,754          |
| Other receivables and prepayments    | 1,089         | 828           | 832           | 978            | 1,104          |
| Inventories                          | 17            | 35            | 45            | 52             | 58             |
| Other current assets                 | 0             | 0             | 0             | 0              | 0              |
| <b>Non-current assets</b>            | <b>50,477</b> | <b>53,427</b> | <b>58,897</b> | <b>66,473</b>  | <b>73,939</b>  |
| Property, plant and equipment        | 45,667        | 48,783        | 54,537        | 61,349         | 67,843         |
| Lease prepayment                     | 0             | 0             | 0             | 0              | 0              |
| Intangible assets                    | 968           | 1,016         | 1,003         | 990            | 977            |
| Investment in JV and associates      | 380           | 667           | 667           | 667            | 667            |
| Deferred tax assets                  | 36            | 38            | 38            | 38             | 38             |
| Other non-current assets             | 3,426         | 2,923         | 2,653         | 3,430          | 4,414          |
| <b>Total assets</b>                  | <b>56,388</b> | <b>60,110</b> | <b>79,732</b> | <b>104,011</b> | <b>126,625</b> |
| <b>Current liabilities</b>           | <b>10,270</b> | <b>10,951</b> | <b>13,267</b> | <b>16,920</b>  | <b>20,561</b>  |
| Trade and bill payables              | 309           | 434           | 897           | 826            | 932            |
| Other payables                       | 4,549         | 4,294         | 4,530         | 5,207          | 5,871          |
| Short term borrowings                | 5,412         | 6,223         | 7,839         | 10,887         | 13,758         |
| Other current liabilities            | 0             | 0             | 0             | 0              | 0              |
| <b>Non-current liabilities</b>       | <b>34,255</b> | <b>35,510</b> | <b>52,951</b> | <b>73,353</b>  | <b>92,561</b>  |
| Deferred tax liabilities             | 32            | 29            | 29            | 29             | 29             |
| Long-term borrowings                 | 33,766        | 35,020        | 52,461        | 72,862         | 92,070         |
| Other non-current liabilities        | 458           | 461           | 461           | 461            | 461            |
| <b>Total liabilities</b>             | <b>44,525</b> | <b>46,462</b> | <b>66,218</b> | <b>90,273</b>  | <b>113,122</b> |
| <b>Minority interests</b>            | <b>2,571</b>  | <b>2,730</b>  | <b>2,825</b>  | <b>2,878</b>   | <b>2,832</b>   |
| <b>Shareholders' equities</b>        | <b>9,292</b>  | <b>10,918</b> | <b>10,688</b> | <b>10,859</b>  | <b>10,672</b>  |

Source(s): Company, ABCI Securities estimates



**Consolidated cash flow statement (2013A-2017E)**

| <b>FY ended Dec 31 (RMB mn)</b>         | <b>2013A</b>  | <b>2014A</b>  | <b>2015E</b>  | <b>2016E</b>  | <b>2017E</b>  |
|---|---------------|---------------|---------------|---------------|---------------|
| <b>Profit before tax</b>                | <b>360</b>    | <b>-62</b>    | <b>581</b>    | <b>325</b>    | <b>-286</b>   |
| Change in depreciation and amortization | 2,218         | 2,398         | 2,697         | 3,092         | 3,491         |
| Change in working capital               | 7             | 728           | 1,148         | -479          | -171          |
| Net financial cost (income)             | 2,111         | 2,234         | 2,234         | 1,874         | 2,650         |
| Income tax paid                         | -35           | -73           | -23           | -95           | -53           |
| Net interest received                   | 16            | 13            | 0             | 0             | 0             |
| Others                                  | -13           | -45           | -70           | -82           | -93           |
| <b>CF Operating</b>                     | <b>4,663</b>  | <b>5,193</b>  | <b>6,567</b>  | <b>4,635</b>  | <b>5,539</b>  |
| Capex                                   | -4,601        | -5,513        | -8,422        | -9,875        | -9,956        |
| Increase in intangible assets           | 0             | 0             | -15           | -16           | -17           |
| Others                                  | -276          | -222          | 0             | 0             | 0             |
| <b>CF Investing</b>                     | <b>-4,877</b> | <b>-5,735</b> | <b>-8,437</b> | <b>-9,891</b> | <b>-9,973</b> |
| Net Capital raise                       | 0             | 0             | 13            | 0             | 0             |
| Net debt financing                      | 1,665         | 3,969         | 19,056        | 23,450        | 22,079        |
| Dividend payout                         | -257          | -77           | 0             | -76           | -43           |
| Interest paid                           | -2,215        | -2,355        | -2,262        | -2,062        | -3,015        |
| Others                                  | -79           | 195           | 0             | 0             | 0             |
| <b>CF Financing</b>                     | <b>-885</b>   | <b>1,732</b>  | <b>16,808</b> | <b>21,312</b> | <b>19,021</b> |
| <b>Net change in cash</b>               | <b>-1,099</b> | <b>1,190</b>  | <b>14,937</b> | <b>16,055</b> | <b>14,587</b> |
| Cash at the beginning                   | 2,104         | 1,001         | 2,190         | 17,128        | 33,183        |
| Adjustment (Time deposit & FX effect)   | -4            | -1            | 0             | 0             | 0             |
| <b>Cash at the end</b>                  | <b>1,001</b>  | <b>2,190</b>  | <b>17,128</b> | <b>33,183</b> | <b>47,770</b> |

Source(s): Company, ABCI Securities estimates

**Key Ratio (2013A-2017E)**

| <b>FY ended Dec 31 (RMB mn)</b>           | <b>2013A</b> | <b>2014A</b> | <b>2015E</b> | <b>2016E</b> | <b>2017E</b> |
|---|--------------|--------------|--------------|--------------|--------------|
| <b>Sales mixed (%)</b>                    |              |              |              |              |              |
| Wind                                      | 95.28        | 98.95        | 97.78        | 97.96        | 98.03        |
| Concession construction                   | 3.29         | 0.15         | 0.00         | 0.00         | 0.00         |
| Others                                    | 1.43         | 0.90         | 2.22         | 2.04         | 1.97         |
| <b>Total</b>                              | <b>100</b>   | <b>100</b>   | <b>100</b>   | <b>100</b>   | <b>100</b>   |
| <b>Profit &amp; loss ratios (%)</b>       |              |              |              |              |              |
| Gross margin                              | 48.06        | 43.28        | 46.09        | 47.20        | 47.22        |
| Operating profit margin                   | 43.66        | 40.95        | 41.89        | 43.00        | 42.72        |
| Pre-tax margin                            | 6.40         | -1.19        | 9.55         | 4.55         | -3.55        |
| Net profit margin                         | 5.46         | -2.46        | 7.83         | 3.73         | -2.91        |
| Selling & administrative expenses/revenue | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| Effective tax rate                        | 14.72        | -106.87      | 18.00        | 18.00        | 18.00        |
| <b>Growth (%)</b>                         |              |              |              |              |              |
| Revenue                                   | 28.90        | -7.89        | 17.16        | 17.50        | 12.92        |
| Gross profit                              | 26.96        | -17.05       | 24.75        | 20.33        | 12.98        |
| Operating profit                          | 16.25        | -13.60       | 19.83        | 20.62        | 12.19        |
| Net profit                                | 64.76        | -141.50      | -473.17      | -44.01       | -187.96      |
| <b>Balance sheet ratios</b>               |              |              |              |              |              |
| Current ratio (x)                         | 0.58         | 0.61         | 1.57         | 2.22         | 2.56         |
| Quick ratio (x)                           | 0.47         | 0.53         | 1.50         | 2.16         | 2.51         |
| Cash ratio (x)                            | 0.10         | 0.23         | 1.29         | 1.96         | 2.32         |
| Trade and bill receivables days           | 246.65       | 230.79       | 170.00       | 170.00       | 170.00       |
| Trade and bill payables turnover days     | 38.53        | 53.84        | 100.00       | 80.00        | 80.00        |
| Inventory turnover days                   | 2.11         | 4.37         | 5.00         | 5.00         | 5.00         |
| Total debt / equity ratio (%)             | 421.63       | 377.74       | 564.15       | 771.24       | 991.69       |
| Net debt / equity ratio (%)               | 410.85       | 354.48       | 403.91       | 465.66       | 544.05       |
| <b>Returns (%)</b>                        |              |              |              |              |              |
| ROAA                                      | 0.4          | -0.3         | 0.5          | 0.2          | -0.2         |
| ROAE                                      | 2.6          | -1.5         | 3.5          | 2.0          | -1.7         |
| Payout ratio                              | 95.28        | 98.95        | 97.78        | 97.96        | 98.03        |

Source(s): Company, ABCI Securities estimates

## Disclosures

### Analyst Certification

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### Definition of equity rating

| Rating | Definition  |
|--------|---|
| Buy    | Stock return $\geq$ Market return rate                      |
| Hold   | Market return $\pm$ 6% mStock return $<$ Market return rate |
| Sell   | Stock return $<$ Market return $\pm$ 6%                     |

Stock return is defined as the expected % change of share price plus gross dividend yield over the next 12 months

Market return: 5-year average market return rate from 2007-2011

Time horizon of share price target: 12-month

### Definition of share price risk

| Rating    | Definition   |
|-----------|--|
| Very high | 2.6 m180 day volatility/180 day benchmark index volatility         |
| High      | 1.5 m180 day volatility/180 day benchmark index volatility $<$ 2.6 |
| Medium    | 1.0 m180 day volatility/180 day benchmark index volatility $<$ 1.5 |
| Low       | 180 day volatility/180 day benchmark index volatility $<$ 1.0      |

We measure share price risk by its volatility relative to volatility of benchmark index. Benchmark index: Hang Seng Index.

Volatility is calculated from the standard deviation of day to day logarithmic historic price change. The 180-day price volatility equals the annualized standard deviation of the relative price change for the 180 most recent trading days closing price.

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