



November 16, 2016

Sector Rating:  
**OVERWEIGHT**

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**Key Data**

Avg.16E P/E (x)	11.16
Avg.16E P/B (x)	1.00
Avg.16E Dividend Yield (%)	2.05

Source(s): Company, Bloomberg, ABCI Securities

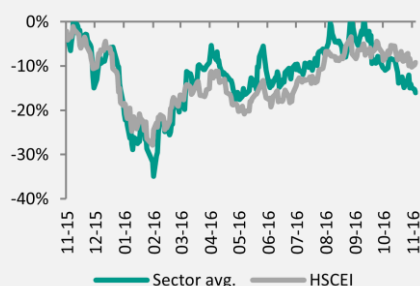
**Sector performance (%)**

	Absolute	Relative*
1-mth	-6.30%	-5.35%
3-mth	-15.25%	-13.13%
6-mth	0.24%	-13.60%
12-mth	-12.14%	-5.95%

\*Relative to HSCEI

Source(s): Bloomberg, ABCI Securities

**1-Year Sector performance**



Source(s):Bloomberg

# China Alternative Energy Sector

## Strong fundamentals with supportive policies

**Investment themes**

- ❖ China's new policy would spur demand for renewable energy capacity in IPPs. Non-hydro renewable power capacity would grow by 15% CAGR in 2015-20E.
- ❖ With the government's support, nuclear power and wind power capacities would expand by 16%/14% CAGRs in 2015-20E.
- ❖ Huaneng Renewables (HNR, 958 HK, BUY) is our Top Pick among the wind power operators; for the nuclear power sector, we recommend CGN Power (CGN, 1816 HK, BUY)

**China's new policy to support non-hydro renewable power capacity growth in 2015-20.** Under the government's new policy approved in Mar 2016, the proportion of non-hydro renewable energy (e.g. wind and solar) generated in each Independent Power Producers (IPP) will account for no less than 9% of their total power generation by end-2020. New policy would prompt IPPs to expand wind power generation, given that the average mix of non-hydro renewable energy proportion is ~ 10% for the 5 largest IPPs. Assuming the minimum 9% standard mandated by the policy and coal-fire power output to remain unchanged, renewable (wind + solar) output by end-2020 would increase by 15% CAGR in 2015-20E; assuming a 15% standard, output would grow by 28% CAGR in 2015-20E.

**China's nuclear power capacity would expand by 16% CAGR in 2015-20E.** Based on China's "Strategic action plan of energy development (2014-2020)" announced in June 2014 and "13<sup>th</sup> Five-Year Plan for power" issued on Nov 7, 2016, the government targets a nuclear power capacity of 58GW in 2020, representing a 114% jump from 27GW in 2015 or a 5-year CAGR of 16%. Nuclear is a more cost-effective energy source. According to industry data, unit production cost of nuclear power is RMB 0.28/kWh, similar to RMB 0.3/kWh for hydro, but much lower than RMB 0.4/kWh for coal-fire, RMB 0.5/kWh for wind and RMB 0.9/kWh for solar.

**China targets to expand wind power output by 14% CAGR during 2015-20E.** According to "the draft of 13th Five-Year Plan for renewable energy" issued by The National Energy Administration (NEA) in 2016, the government targets to attain 250GW of installed wind power capacity by end-2020. This implied a 95% increase from the 128GW at end-2015 or a 14% CAGR in 2015-20. Also, the "13<sup>th</sup> Five-Year Plan for power" issued in Nov 2016 by NEA proposed a wind power capacity target of no less than 210GW by end-2020. Assuming utilization hour to remain similar to the 2015 level, wind power output would expand by a CAGR of 14% in 2015-20E. We believe the rapid output expansion should accelerate earnings growth for the wind power operators.

**Current valuation for the whole sector is very attractive.** Share price fell by 15% in the recent 3 months which is overdone, in our view. For nuclear power, 2017E forward P/E is now trading at 10x, close to the historical low of 10x in June 2016. For wind power, 2017E forward P/E is trading at 9x close to the historical low at 8x in Feb 2016 and close to coal-fire IPPs' valuation of 7x which is unjustified.

**OVERWEIGHT sector outlook; prefer CGN (1816 HK) and HNR (958 HK).** We like Huaneng Renewables (HNR, 958 HK, BUY) for its capacity growth under the new policy. We also prefer CGN Power (CGN, 1816 HK, BUY) for its leading status in the nuclear industry as well as its prime assets.

**Risk factors:** (1) High gearing of players; (2) Natural resources risks; (3) Grid connection risks; (4) Policy risks; (5) Economic slowdown; (6) Safety issue in operation.

**Sector Valuation Summary (data as of Nov 15, 2016)**

Company	Ticker	Rating	Price (HK\$)	TP (HK\$)	FY16E P/E(x)	FY17E P/E (x)	FY16E P/B (x)	FY17E P/B (x)	FY16E Yield (%)	FY17E Yield (%)
CGN Power	1816 HK	Buy	2.26	2.90	12.25	10.14	1.43	1.29	2.45	2.96
Huaneng Renewables	958 HK	Buy	2.39	3.40	8.03	7.00	1.03	0.92	2.49	2.86
China Longyuan	916 HK	Buy	5.68	7.30	11.73	9.95	1.05	0.97	1.73	2.01
Datang Renewable	1798 HK	Hold	0.73	0.82	12.58	7.87	0.41	0.40	1.59	2.54

Source(s): Companies, ABCI Securities estimates



## Contents

Key positives and future outlook.....	3
Overhangs of the alternative energy industry .....	6
CGN Power (1816 HK) .....	8
Huaneng Renewables (958 HK) .....	17
Longyuan Power (916 HK) .....	24
China Datang Renewable (1798 HK).....	31
Disclosures.....	39



## Key positives and future outlook

We believe alternative energy (include nuclear, wind, etc.) would be China's major energy source in the future due to the increasingly severe pollution resulted from traditional coal-fire power generation. Given coal-fire energy still contributes to ~70% of China's power output, the government will continue to promote alternative energy.

We believe nuclear power and wind power should be the country's preferred alternative energy choices because 1) No pollutant is emitted in the process of power generation ; 2) higher utilization hour (nuclear at ~6,000hr and wind at ~1,800hr, higher than solar's ~1,300hr), which can reduce average power generation cost.

In our view, recent corrections in alternative energy counters offer great opportunities for investors to accumulate.

### Fundamental basis

#### China's new policy to support non-hydro renewable power capacity growth during 2015-20

Under the government's new policy approved in the National People's Congress in Mar 2016, the proportion of non-hydro renewable energy (e.g. wind and solar) generated in each Independent Power Producers (IPP) will account for no less than 9% of their total power generation by end-2020. In Apr 2016, National Energy Administration announced a new policy stating that all coal-fire IPP groups (e.g. Huaneng, Datang, Huadian, etc.) should further increase the proportion of non-hydro renewable energy in the overall power generation from 9% to 15% by end-2020.

The Chinese government is determined to promote renewable energy (include wind and solar energy). Currently, non-hydro renewable energy accounts for 10% of the power output in each of the 5 largest IPPs. The new policy is likely to drive IPPs to expand wind power generation rapidly, boosting output growth in 2015-20. Based on our estimates, as of end-2015, China's coal-fire, wind and solar power outputs were 4,210,200GWh, 185,088GWh and 55,961GWh, respectively. Assuming the 9% standard and coal-fire output to stay unchanged, renewable (wind + solar) output by end-2020 would be 490,154GWh, representing a 15% CAGR during 2015-20E. Based on a 15% standard, the 5-year CAGR would be 28%. Demand for such output would drive IPPs to expand capacities.

#### China's nuclear power capacity would expand by 16% CAGR in 2015-20E

Based on China's "Strategic action plan of energy development (2014-2020)" (The Plan) announced in June 2014, the government targets a nuclear power capacity of 58GW in 2020, representing a 114% jump from 2015 or a 5-year CAGR of 16% from 27GW. In the recently announced "13<sup>th</sup> Five-Year Plan for power" on Nov 7, 2016, the Chinese government reiterated its end-2020 nuclear power capacity target. Nuclear is a more cost-effective energy source. According to the industry data, unit production cost of nuclear power is RMB 0.28/kWh, similar to RMB 0.3/kWh for hydro, but much lower than RMB 0.4/kWh for coal-fire, RMB 0.5/kWh for wind and RMB 0.9/kWh for solar.



### **China targets to expand wind power output by 14% CAGR during 2015-20E**

Due to high dependence on fossil energy (coal-fire power accounted for ~70% of total output in 2015), and rising concerns over pollution, the Chinese government is opting for a cleaner and more sustainable energy structure. According to “the draft of 13th Five-Year Plan for renewable energy” (the Draft) issued by The National Energy Administration (NEA) in 2016, China government targets to attain 250GW of installed wind power capacity by end-2020. This implied a 95% increase from the 128GW at end-2015 or a 14% CAGR in 2015-20E. According to the “13<sup>th</sup> Five-Year Plan for power” issued by National Energy Administration on Nov 7, 2016, Chinese government targets to attain no less than 210GW wind power capacity by end-2020. If utilization hour remains similar to the 2015 level, the wind power output would expand by a 5-year CAGR of 14% in 2015-20E. We believe the sharp increase in output would accelerate earnings for the wind power operators.

### **Decreasing production unit cost continue to be a plus in promoting wind power**

Due to technological advancement, the unit cost of wind power equipment has been decreasing over the years, hence reducing the production cost. According to the industry data, China’s wind power equipment unit cost declined by 30% from RMB 5.8/W at end-2008 to RMB 4/W at end-2015, indicating a negative CAGR of 5% during the period. We believe this number would continue to trend down in the long term.

### **Increasing direct sales of electricity to ease the wind power curtailment issue**

Wind power curtailment remains a key problem in wind power transmission. Increase in direct sales of electricity, however, may help alleviate the issue. Direct sales means wind power producer could sell power to customers without passing through the State Grid system (where bottleneck occurs and results in power curtailment), although the tariff is at a 20-30% discount to the national one. According to the power industry data, the proportion of power direct sales (coal-fire, wind, solar and all power sources) to overall power output nationwide trended up from 0.2% (8,040GWh) at end-2010 to 5.4% (303,394GWh) at end-2015, suggesting direct sales may eventually become the dominant way of selling.

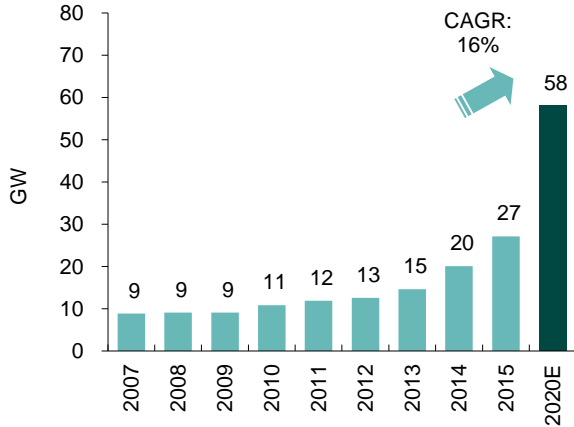
## **Valuation basis**

### **Recent share price correction offers opportunity to accumulate**

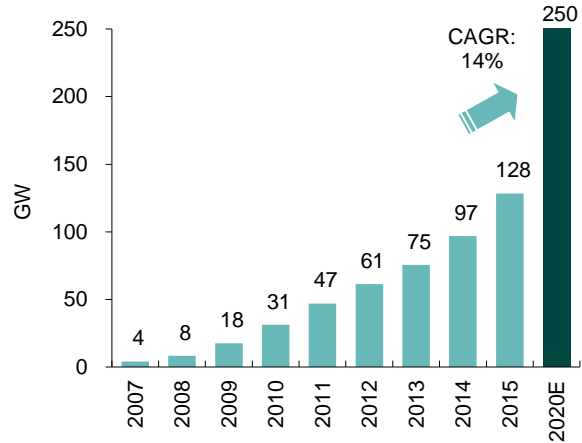
Alternative energy sector has been experiencing a downward correction in recent months, falling by 15% in the recent 3 months which is overdone in our view.

- ◆ **P/E:** For nuclear power, 2017E forward P/E is now trading at 10x, close to the historical low of 10x in June 2016. For wind power, 2017E forward P/E is trading at 9x close to the historical low at 8x in Feb 2016 and close to coal-fire IPPs’ valuation of 7x. Given the solid net profit growth expected, we think nuclear and wind power operators deserve a higher valuation.
- ◆ **P/B:** For nuclear power, 2017E forward P/B is now trading at 1.3x, close to the historical low of 1.2x in June 2016. For wind power, 2017E forward P/B is now trading below book value at 0.8x, close to the historical low at 0.6x in Feb 2016
- ◆ **ROE:** For nuclear power, 2016E/17E ROE are 12%/13%. For wind power, 2016E/17E ROE are 9%/9%. If we exclude the outlier Datang Renewable (1798 HK, HOLD), ROE would be ~11%/12%.

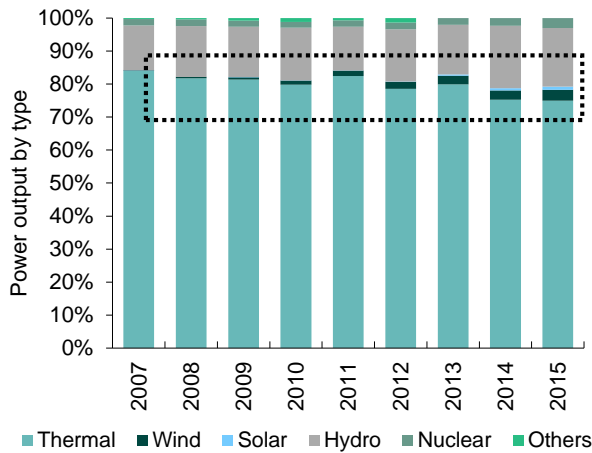
We believe the current valuations offer a good entry point for investors. Improvement in China's economy and market sentiment would trigger a re-rating of the alternative energy sector

**Exhibit 1: China's nuclear power capacity would grow rapidly in 2015-2020**


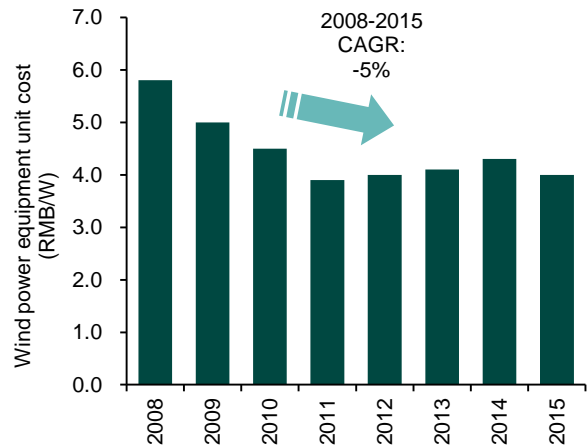
Source(s): State Council, ABCI Securities

**Exhibit 2: China's wind power capacity would expand substantially in 2015-2020**


Source(s): NEA, ABCI Securities

**Exhibit 3: China's power output structure indicates much growing room for renewable energy**


Source(s): NEA, ABCI Securities

**Exhibit 4: China's wind power equipment unit cost has been trending down**


Source(s): bjx.com, NEA



## Overhangs of the alternative energy industry

Power curtailment, safety issue and declining wind power tariff are the key constraints in the widespread adoption of alternative energy.

### Wind power tariff cut will be a long-term trend

Wind power tariff in China would maintain a downtrend going forward due to: 1) A lower wind power tariff would encourage more users to switch from traditional coal-fire energy to wind energy; 2) China would like to alleviate the financial burden of industrial companies to boost the waning industrial production. We believe investors should focus on capacity growth, all-in unit capacity cost, net gearing ratio, etc. when evaluating the earnings potential of a wind power operator.

### Wind power curtailment may lower utilization hour, especially in the “3-North” regions

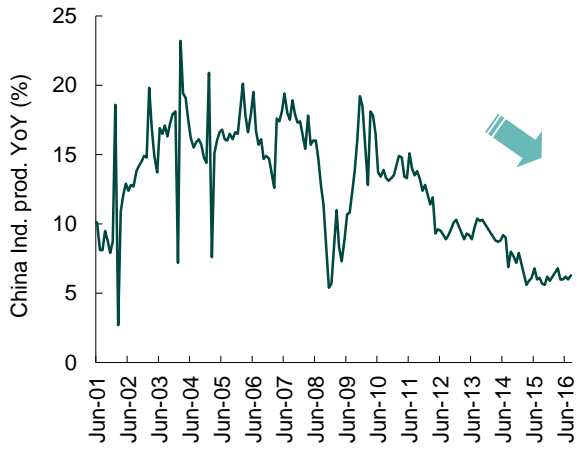
Wind power curtailment is a result of bottlenecks in the cross-regional transmission network that fails to transmit wind power to coastal regions with high demands. This situation is the worst in the “3-North” regions, which include northeast China, northwest China, and Inner Mongolia. While wind resources are rich in these regions, the lack of efficient facilities in transmitting electricity means that power generated in these areas is mostly wasted. According to National Energy Administration data, in 2015, 34bn kWh of wind power was lost due to the transmission network bottleneck – the lost amount was equivalent to 15% of total nationwide wind power output. According to National Energy Administration data, China’s average utilization hour for wind power decreased to 1,728hr in 2015 from 2,077hr in 2009, and we believe the reduction was driven by power curtailment.

### Decreased power demand may hinder wind power development

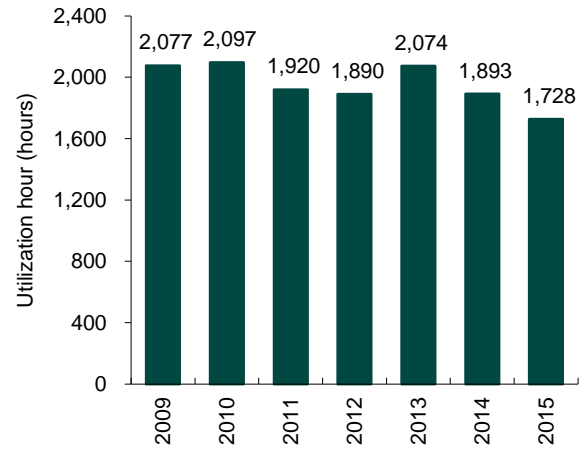
Any slowdown in industrial activities would slash power demand and hinder wind power development. According to National Energy Administration data, China’s power consumption grew 0.5%YoY in 2015, the lowest in recent years. This was mainly due to waning industrial production given that ~ 70% of China’s power consumption came from the industrial sector. According to Bloomberg data, China’s industrial production growth decreased from 19.2% in November 2009 to 6.1% in Oct 2016.

### Safety issue of nuclear power

The Fukushima Dai-ichi nuclear accident in 2011 has increased public awareness on the safety of nuclear power. We believe the occurrence of any nuclear power accidents, domestic or foreign, will negatively impact the development of nuclear plants in China. Any delay in nuclear plants completion would increase construction cost and impact operators’ profits.

**Exhibit 5: Sluggish activities in industrial production reduce overall power demand**


Source(s): Bloomberg, ABCI Securities

**Exhibit 6: China's wind power utilization hour in 2015 fell**


Source(s): NEA, ABCI Securities



November 16, 2016  
Company Report  
Rating: BUY  
TP: HK\$ 2.90

Share price (HK\$) 2.26  
Est. share price return 28.32%  
Est. dividend yield 2.44%  
Est. total return 30.76%

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**Key Data**

Market share (HK\$m)	102,714
3-mth avg. daily turnover (HK\$ mn)	107
52-week high/low (HK\$)	3.25/2.00
Issued shares (mn)	45,449
Major shareholder(s) (%): CGNPC	64.2

Source(s): Company, Bloomberg, ABCI Securities

**1H16 revenue breakdown (%)**

Electricity	94.5
Service revenue	4.7
Sales of other goods	0.8

Source(s): Company, ABCI Securities

**Share performance (%)**

	Absolute	Relative*
1-mth	0.00%	0.89%
3-mth	-7.41%	-5.35%
6-mth	-6.21%	-20.13%
12-mth	-28.18%	-22.06%

\*Relative to HSCEI

Source(s): Bloomberg, ABCI Securities

**1-Year stock performance**



Source(s): Bloomberg, ABCI Securities

# CGN Power (1816 HK)

## A key proxy play in China's nuclear power sector

- China would boost nuclear power output by 16% CAGR in 2015-20E
- CGN would record 18%/21% YoY in 2016E/17E adj. net profit growth on solid capacity expansion
- Key facilities in Guangdong province suggest a higher utilization hour
- We maintain **BUY** with a DCF-derived TP of HK\$ 2.90, representing 16x/13x 2016E/17E P/E and 1.8x/1.7x 2016E/17E P/B.

**China's nuclear power output to expand by 16% CAGR in 2015-20E.** The average proportion of nuclear power to overall power output in developed countries is ~30% while the global average is 14%. In China, the figure was low at 3% in 2015, suggesting room for nuclear power development is ample. According to the "Strategic action plan of energy development (2014-2020)" (The Plan) announced by State Council in June 2014 and "13<sup>th</sup> Five-Year Plan for power" announced by National Energy Administration in Nov 2016, the Chinese government is targeting to boost nuclear power capacity to 58GW by end-2020, a 114% jump from 27GW by end-2015, representing a 5-year CAGR of 16%. If we assume current utilization hour to remain unchanged, nuclear power output would expand by 16% CAGR in 2015-20E.

**2016/17E net profit would expand by 18%/21%YoY.** CGN should record 18%/21%YoY adj. net profit growth in 2016E/17E on solid capacity growth. For the subsidiaries, Yangjiang Unit 3 commenced commercial operation in 1H16 ; we expect Yangjiang Unit 4 & 5 and Taishan Unit 1 & 2 to start commercial operation in 2017. For JVs and associates, Hongyanhe Unit 4 would start contributing to power output in 2017. We expect CGN's attributable capacity growth to increase 13%/15%YoY in 2016E/17E and adj. net profit would also rise 18%/21%YoY for the same period.

**Key facilities in Guangdong province suggest a higher utilization hour.** As of end-2015, 71% of CGN's attributable nuclear power capacity came from the Guangdong province - these power plants are serving wealthy cities such as Hong Kong, Guangzhou, Shenzhen, etc. Given the utilization hour in Guangdong (~ 3,718hr) is higher than that of the national average in 1H16 (~3,347hr), CGN's operation in Guangdong would increase profitability.

**BUY with TP at HK\$ 2.90.** Our DCF-derived TP was HK\$2.90, representing 16x/13x FY16E/17E P/E and 1.8x/1.7x FY16E/17E P/B. Maintain **BUY**.

**Risks:** (1) Over-capacity in power industry; (2) Falling utilization hours; (3) Operation safety; (4) Construction risk; (5) Fuel cost risk; (6) Tariff risk; (7) Currency and interest rate risks; (8) Fundraising activities to finance future M&A.

**Results and Valuation**

FY ended Dec 31	2014A	2015A	2016E	2017E	2018E
Revenue (RMB mn)	20,719	23,263	28,937	36,553	43,423
Chg (% YoY)	19.3	12.3	24.4	26.3	18.8
Adj. net profit (RMB mn)	4,647	6,217	7,339	8,864	10,160
Chg (% YoY)	15.1	33.8	18.1	20.8	14.6
Adj. EPS (RMB)	0.140	0.137	0.161	0.195	0.223
Chg (% YoY)	-3.3	-2.1	18.1	20.8	14.6
BVPS (RMB)	1.786	1.245	1.386	1.534	1.701
Chg (% YoY)	60.1	-30.2	11.3	10.6	10.9
P/E (x)	14.16	14.46	12.25	10.14	8.85
P/B (x)	1.11	1.59	1.43	1.29	1.16
ROE (%)	10.42	11.64	11.64	12.71	13.14
ROA (%)	2.80	3.03	2.93	3.24	3.41
DPS(RMB)	0.050	0.042	0.048	0.058	0.067
Yield (%)	2.51	2.12	2.45	2.96	3.39
Net gearing* (%)	136.1	184.7	206.0	198.2	188.0

\*Net gearing=Net debt/Shareholder's equity

Source(s): Bloomberg, ABCI Securities estimates



## 1H16 results highlight

CGN's 1H16 net profit was RMB 3.6bn (+3% YoY). Excluding the net exchange loss of RMB507mn, adjusted net income would be RMB 3.8bn (+36% YoY), achieving 53%/48% of Bloomberg consensus/our estimates. Historically, 1H contributed to ~50% of its full-year net income. The 1H16 results are broadly in line with our forecasts while exceeding that of the market.

### **24%YoY growth in operating capacity was key driver of net profit growth**

Management announced that operating capacity was 17GW, up 24% YoY from 14GW in 1H15 as 3 new nuclear power-generating units commenced commercial operation, including Yangjiang Unit 3, Ningde Unit 4 and Fangchenggang Unit 1. Increased capacity boosted on-grid power to 47,890GWh in 1H16, 32% YoY higher than 36,310GWh in 1H15.

### **14GW of constructing capacity suggests ample room for net profit growth**

By end-July 2016, 14GW of capacity (11 power units) is under construction, equivalent to ~82% of the Group's existing operating capacity. Along with the government's strong push on nuclear power, the capacity growth would translate to higher net income growth.

### **Power demand in Guangdong remains solid; Liaoning and Fujian tell another story**

1H16 utilization hour in Guangdong province was similar to 1H15 despite weakened power demand; power plants in Hongyanhe (in Liaoning) and Ningde (in Fujian) recorded a decline. Management said the solid power demand could be driven by the success of economic transformation in the Guangdong province.

### **Net gearing ratio at 187% prompts fundraising concern**

As CGN has 14GW of capacity under construction, its net gearing ratio would remain high and this may necessitate fundraising in the future.



Results summary		1H15	1H16	YoY
<b>Income Statement</b>				
Revenue	RMBmn	9,590	13,074	36%
Sales of electricity	RMBmn	8,954	12,357	38%
Service revenue	RMBmn	534	620	16%
Others	RMBmn	102	97	-5%
Op. profit	RMBmn	6,142	5,774	-6%
Net profit	RMBmn	3,478	3,598	3%
Adj. net profit	RMBmn	2,826	3,832	36%
Basic EPS	RMB	0.08	0.08	0%
Adj. basic EPS	RMB	0.06	0.08	31%
<b>Ratios</b>				
Op. margin	%	64.0%	44.2%	-20ppt
Net margin	%	36.3%	27.5%	-9ppt
Adj. net margin	%	29.5%	29.3%	0ppt
Net gearing/(Net cash)	%	188%	187%	-1ppt
<b>Nuclear power</b>				
Operating installed capacity	MW	13,799	17,090	24%
Constructing capacity	MW	12,290	14,650	19%
On-grid power generation	GWh	36,310	47,890	32%
Utilization hour	Hours	3,279	3,229	-2%

Source(s): Company data

## Key positives and future outlook

CGN would continue to benefit from the government's supportive policies and its operation in the Guangdong province.

### Sector outlook

**China is likely to boost nuclear power development. We expect output to expand by 16% CAGR growth in 2015-20E.**

The average proportion of nuclear power to overall power output in developed countries is ~30% while the global average is 14%, China's figure, however, is low at 3% in 2015, suggesting China has ample room to expand nuclear power output. According to the "Strategic action plan of energy development (2014-2020)" (The Plan) by the State Council in June 2014 and "13<sup>th</sup> Five-Year Plan for power" by National Energy Administration in Nov 2016, the Chinese government is targeting to boost nuclear power capacity to 58GW by end-2020, a 114% jump from 27GW in 2015, representing a 16% CAGR in 2015-20E. If we assume utilization hour to remain unchanged, nuclear power output would expand by 16% CAGR in 2015-20E.

**Lower production cost would help nuclear power to achieve a higher mix in China's overall energy structure**

According to the industry data, unit production cost for nuclear power is ~RMB 0.28/kWh, similar to RMB 0.3/kWh for hydro, but much lower than RMB0.4/kWh for coal-fire, RMB0.5/kWh for wind, and RMB0.9/kWh for solar. We believe a low production cost would facilitate adoption.

### Company outlook

**2016/17E adj. net profit would grow by 18%/21%YoY**

We expect CGN's 2016E/17E adj. net profit to grow 18%/21%YoY on capacity expansion. For its subsidiaries, Yangjiang Unit 3 commenced commercial operation in 1H16 and we expect Yangjiang Unit 4 & 5 and Taishan Unit 1 & 2 to commence commercial operation in 2017. For JVs and associates, Hongyanhe Unit 4 would start contributing to power output in 2017. We therefore expect CGN's attributable capacity growth to increase by 13%/15%YoY in 2016E/17E. Hence, earnings would also go up by 18%/21%YoY for the same period.

**Fangchenggang power plant as the future earnings driver**

CGN's parent company has a 61% stake in Fangchenggang nuclear power plant in the Guangxi province. Injection of Unit 1 and 2 to CGN scheduled in 1H17 would boost its earnings in 2017 due the additional attributable capacity of 1,220MW, which is equivalent to ~15% of CGN's total at present. In addition, Unit 3 with an attributable capacity 610MW, which is currently under construction, could be injected into CGN in the future. We believe all these would boost CGN's future earnings.

**Key assets in Guangdong suggest higher utilization hour**

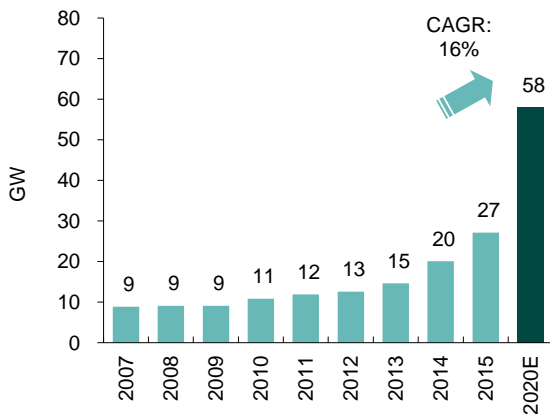
CGN's operation in Guangdong province recorded higher utilization hour than other power plants located in the inland provinces. As of end-2015, 71% of CGN's attributable nuclear power capacity came from the Guangdong province. Facilities in Guangdong service wealthy cities such as Hong Kong, Guangzhou, Shenzhen, etc. Utilization hour in Guangdong was higher than the national average in 1H16 (~3,718hr vs. 3,347hr nationwide), partially attributable of the province's successful transition from secondary to tertiary industry. We believe CGN's operation in Guangdong would help the Group

attain higher profitability.

### Capital from 17% stake disposal of Yangjiang power plant may fund future investment

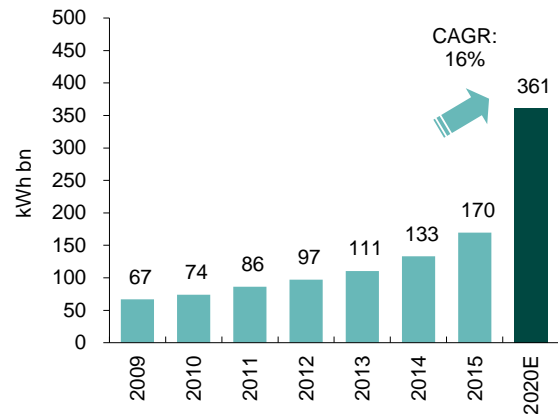
CGN announced on Oct 7, 2016 that the Group intended to dispose of its 17% direct and indirect equity interest in Yangjiang power plant. CGN originally controlled a 78% stake in Yangjiang power plant (46% direct control, 32% indirect control); after the disposal, CGN's stake will drop to 61%. According to CGN's data, utilization hour in Yangjiang power was lower than other nuclear power plants in Guangdong (3,522hr vs. 3,816hr for other plants in Guangdong in 1H16). We believe the capital received from the disposal would help fund future investment, especially ones with better returns. Nonetheless, the disposal may reduce CGN's future net profit growth. Given Yangjiang power plant account for 34.7% and 31.2% of CGN's total installed capacity in 2016E and 2017E, the disposal may lower CGN's 2016E/17E adj. net profit by 8% each year.

**Exhibit 8: China's nuclear power capacity would rise sharply in 2015-20**



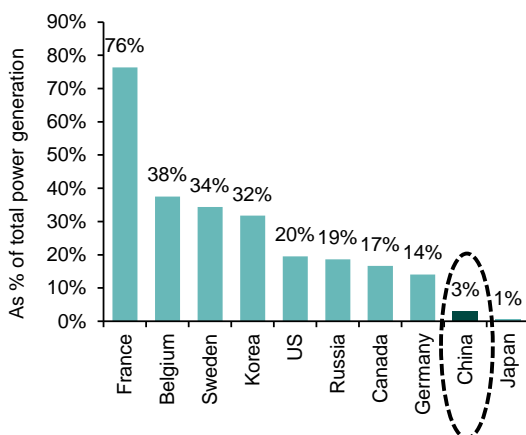
Source(s): State Council, ABCI Securities

**Exhibit 9: China's nuclear power output would grow rapidly in years to come**



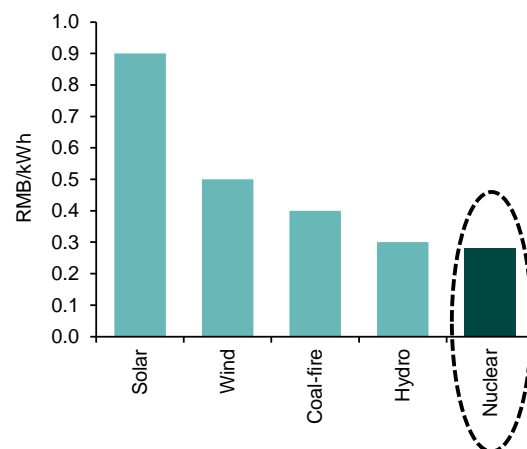
Source(s): State Council, ABCI Securities

**Exhibit 10: Nuclear power has ample room to grow in China, as illustrated by its low contribution to overall power generation as of 2015**



Source(s): IAEA, ABCI Securities

**Exhibit 11: Low production cost should facilitate adoption of nuclear power in China**



Source(s): Huadian Fuxin, ABCI Securities

## Major concerns

### Nuclear power accident may slash CGN's net profit

The Fukushima Dai-ichi nuclear power plant accident in 2011 has raised awareness on the safety of nuclear power. Indeed, any nuclear power accident, domestic or foreign, will negatively impact the development of CGN's projects, partially through the call for more stringent safety standard for nuclear operation. Potential construction delay in CGN's projects or operation suspension would affect CGN's net profit growth, which could trigger a de-rating of the counter.

### RMB to depreciate further

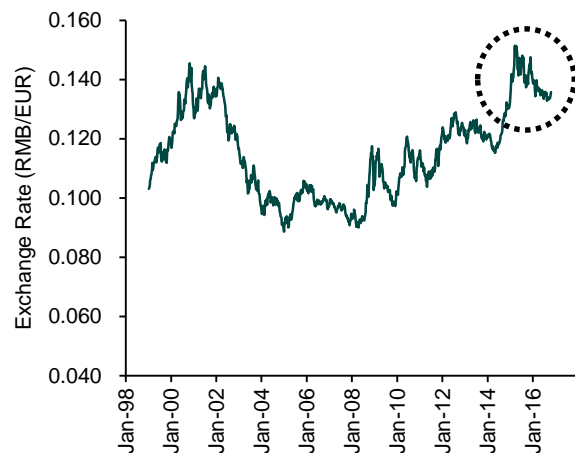
Continuous depreciation of RMB would cause exchange loss and hamper net profit growth. RMB has been trending down against Euro in the past 12 months, declining by 10% since Mar 2015. CGN's equipment and raw materials were mainly imported from Europe. As of end 2015, 12% of the Group's total debt was Euro-denominated while the Group's revenue was mainly from China. A depreciating RMB would lower its future net profit growth. Under our estimate, a 5% depreciation in RMB against Euro would lower CGN's 2016E/17E net profit by 9%/8%.

**Exhibit 12: Fukushima Dai-ichi nuclear power plant accident in 2011**



Source(s): gettyimages.com

**Exhibit 13: RMB depreciation may dent CGN's future net profit**



Source(s): Bloomberg

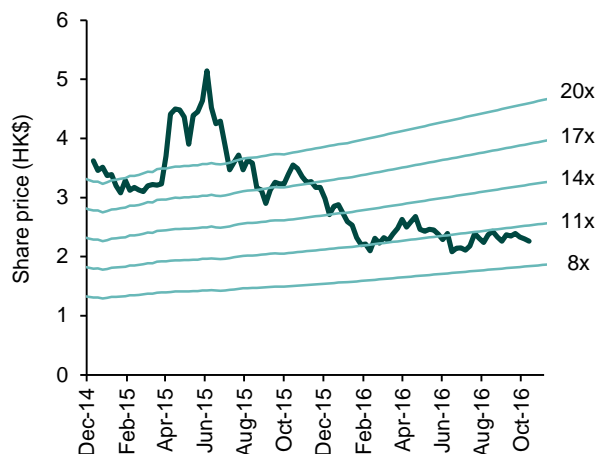
## Valuation

### Maintain BUY; TP at HK\$ 2.90

CGN's 1H16 results are broadly in line with our expectations. We revise down future capacity growth based on the 17% stake disposal of Yangjiang power plant; we also adjust our utilization hour and administration assumptions due to the varying power demand across China. We expect 2016E/17E/18E adj. net profit to grow by 18%/21%/15% YoY.

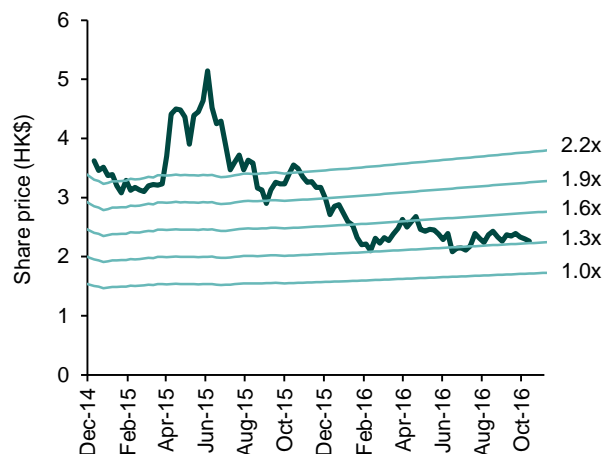
Our DCF-derived TP remains at HK\$ 2.90, implying 16x/13x 2016/17E P/E and 1.8x/1.7x 2016/17E P/B. EPS would grow at a 3-year EPS CAGR of 18% in 2015-18E on the back of solid capacity growth. Our target P/E implies a PEG of 0.7, which is attractive in our view. CGN remains to be the leader of nuclear power operators in China with a 61% market share in terms of nuclear power operating capacity. Its prime facilities located in wealthy regions would help support utilization hour. Overall, we believe the Group would benefit most from China's push into nuclear power. Maintain **BUY**.

Exhibit 14: CGN's fwd P/E chart



Source(s): Bloomberg, ABCI Securities estimates

Exhibit 15: CGN's fwd P/B chart



Source(s): Bloomberg, ABCI Securities estimates



**Consolidated income statement (2014A-2018E)**

<b>FY Ended Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Revenue</b>	<b>20,719</b>	<b>23,263</b>	<b>28,937</b>	<b>36,553</b>	<b>43,423</b>
Electricity	19,327	21,542	26,979	34,322	40,981
Service revenue	1,214	1,517	1,744	2,006	2,206
Sales of other goods	252	204	214	225	236
<b>COGS</b>	<b>-10,643</b>	<b>-12,130</b>	<b>-15,747</b>	<b>-19,080</b>	<b>-23,510</b>
<b>Gross profit</b>	<b>10,076</b>	<b>11,133</b>	<b>13,190</b>	<b>17,473</b>	<b>19,913</b>
SG&A	-1,523	-1,683	-1,742	-2,200	-2,614
Net financial income (cost)	-3,032	-2,616	-3,278	-5,632	-6,073
Other income and gains	3,533	2,356	2,000	2,643	2,854
<b>Pre-tax profit</b>	<b>9,054</b>	<b>9,189</b>	<b>10,170</b>	<b>12,283</b>	<b>14,080</b>
Income tax	-1,228	-1,116	-1,220	-1,474	-1,690
<b>Net profit</b>	<b>7,826</b>	<b>8,073</b>	<b>8,950</b>	<b>10,809</b>	<b>12,390</b>
Profit attributable to:					
Minority interests	-1,633	-1,479	-1,611	-1,946	-2,230
<b>Equity shareholders of the Company</b>	<b>6,193</b>	<b>6,594</b>	<b>7,339</b>	<b>8,864</b>	<b>10,160</b>
<b>Adj. Equity shareholders of the Company</b>	<b>4,647</b>	<b>6,217</b>	<b>7,339</b>	<b>8,864</b>	<b>10,160</b>
<b>Basic EPS (RMB)</b>	<b>0.186</b>	<b>0.145</b>	<b>0.161</b>	<b>0.195</b>	<b>0.223</b>
<b>Adj. basic EPS (RMB)</b>	<b>0.140</b>	<b>0.137</b>	<b>0.161</b>	<b>0.195</b>	<b>0.223</b>
<b>DPS (RMB)</b>	<b>0.050</b>	<b>0.042</b>	<b>0.048</b>	<b>0.058</b>	<b>0.067</b>

Source(s): Company, ABCI Securities estimates

**Consolidated balance sheet (2014A-2018E)**

<b>As of Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Current assets</b>	<b>42,591</b>	<b>26,852</b>	<b>36,389</b>	<b>44,950</b>	<b>54,179</b>
Cash and equivalent	26,963	7,179	17,500	21,758	25,933
Pledged and restricted bank deposits	2,089	2,147	0	0	0
Trade and bill receivables	2,346	3,539	3,964	5,007	5,948
Other receivables and prepayments	882	1,807	1,982	2,504	2,974
Inventories	9,346	10,790	12,943	15,682	19,323
Other current assets	965	1,390	0	0	0
<b>Non-current assets</b>	<b>178,298</b>	<b>190,950</b>	<b>214,417</b>	<b>228,957</b>	<b>243,373</b>
Property, plant and equipment	155,923	168,647	190,528	206,155	219,587
Investment properties	697	652	0	0	0
Intangible assets	1,135	1,254	1,351	1,442	1,527
Investment in JV and associates	11,893	11,877	12,980	14,489	15,997
Deferred tax assets	125	134	0	0	0
Other non-current assets	8,524	8,386	9,559	6,871	6,262
<b>Total assets</b>	<b>220,888</b>	<b>217,801</b>	<b>250,806</b>	<b>273,907</b>	<b>297,552</b>
<b>Current liabilities</b>	<b>28,469</b>	<b>25,291</b>	<b>26,268</b>	<b>28,977</b>	<b>32,201</b>
Trade and bill payables	6,655	8,025	8,629	10,455	12,882
Other payables	442	628	0	0	0
Short term borrowings	7,338	8,537	9,539	10,423	11,219
Other current liabilities	14,033	8,100	8,100	8,100	8,100
<b>Non-current liabilities</b>	<b>113,345</b>	<b>113,801</b>	<b>137,824</b>	<b>149,565</b>	<b>160,143</b>
Deferred tax liabilities	1,695	1,912	0	0	0
Long-term borrowings	102,627	105,381	137,824	149,565	160,143
Other non-current liabilities	9,023	6,508	0	0	0
<b>Total liabilities</b>	<b>141,814</b>	<b>139,092</b>	<b>164,092</b>	<b>178,542</b>	<b>192,344</b>
<b>Minority interests</b>	<b>19,625</b>	<b>22,073</b>	<b>23,684</b>	<b>25,630</b>	<b>27,860</b>
<b>Shareholders' equities</b>	<b>59,450</b>	<b>56,637</b>	<b>63,031</b>	<b>69,736</b>	<b>77,348</b>

Source(s): Company, ABCI Securities estimates



**Consolidated cash flow statement (2014A-2018E)**

<b>FY ended Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Profit before tax</b>	<b>9,054</b>	<b>9,189</b>	<b>10,170</b>	<b>12,283</b>	<b>14,080</b>
Change in depreciation and amortization	2,948	3,372	4,943	5,377	7,212
Change in working capital	-1,698	-2,084	-7,661	-2,478	-2,626
Net financial cost (income)	3,032	2,616	3,278	5,632	6,073
Income tax paid	-742	-778	-1,116	-1,220	-1,474
Net interest received	0	0	0	0	0
Others	-1,992	-1,528	-1,103	-1,509	-1,508
<b>CF Operating</b>	<b>10,603</b>	<b>10,786</b>	<b>8,511</b>	<b>18,085</b>	<b>21,757</b>
Capex	-19,516	-11,512	-26,681	-20,844	-20,466
Increase in intangible assets	-174	-227	-239	-251	-263
Others	2,061	-8,933	140	263	326
<b>CF Investing</b>	<b>-17,629</b>	<b>-20,672</b>	<b>-26,780</b>	<b>-20,833</b>	<b>-20,403</b>
Net Capital raise	21,604	0	25	0	0
Net debt financing	5,827	-1,027	33,445	12,624	11,375
Dividend payout	-5,247	-4,455	-1,909	-2,202	-2,659
Interest paid	-6,548	-6,670	-2,970	-3,418	-5,895
Others	10,773	2,099	0	0	0
<b>CF Financing</b>	<b>26,407</b>	<b>-10,053</b>	<b>28,591</b>	<b>7,005</b>	<b>2,821</b>
<b>Net change in cash</b>	<b>19,381</b>	<b>-19,939</b>	<b>10,322</b>	<b>4,257</b>	<b>4,175</b>
Cash at the beginning	7,596	26,963	7,179	17,500	21,758
Adjustment (Time deposit & FX effect)	-14	155	0	0	0
<b>Cash at the end</b>	<b>26,963</b>	<b>7,179</b>	<b>17,500</b>	<b>21,758</b>	<b>25,933</b>

Source(s): Company, ABCI Securities estimates

**Key Ratio (2014A-2018E)**

<b>FY ended Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Sales mixed (%)</b>					
Electricity	93.28	92.60	93.23	93.90	94.38
Service revenue	5.86	6.52	6.03	5.49	5.08
Sales of other goods	1.22	0.88	0.74	0.62	0.54
<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	48.63	47.86	45.58	47.80	45.86
Operating profit margin	48.65	45.80	42.66	44.88	42.94
Pre-tax margin	43.70	39.50	35.15	33.60	32.42
Net profit margin	37.77	34.70	30.93	29.57	28.53
Selling & administrative expenses/revenue	7.35	7.24	6.02	6.02	6.02
Effective tax rate	13.56	12.15	12.00	12.00	12.00
<b>Growth (%)</b>					
Revenue	19.31	12.28	24.39	26.32	18.80
Gross profit	23.66	10.48	18.48	32.47	13.96
Operating profit	22.00	5.71	15.87	32.89	13.65
Net profit	54.32	3.15	10.87	20.78	14.63
<b>Balance sheet ratios</b>					
Current ratio (x)	1.50	1.06	1.39	1.55	1.68
Quick ratio (x)	1.10	0.51	0.82	0.92	0.99
Cash ratio (x)	1.02	0.37	0.67	0.75	0.81
Trade and bill receivables days	41.32	55.53	50.00	50.00	50.00
Trade and bill payables turnover days	228.26	241.48	200.00	200.00	200.00
Inventory turnover days	320.55	324.68	300.00	300.00	300.00
Total debt / equity ratio (%)	184.97	201.14	233.79	229.42	221.55
Net debt / equity ratio (%)	136.10	184.67	206.03	198.22	188.02
<b>Returns (%)</b>					
ROAA	3.1	3.0	3.1	3.4	3.6
ROAE	13.7	11.4	12.3	13.4	13.8
Payout ratio	26.69	28.95	30.00	30.00	30.00

Source(s): Company, ABCI Securities estimates





November 16, 2016  
Company Report  
Rating: BUY  
TP: HK\$ 3.40

Share price (HK\$)	2.39
Est. share price return	42.26%
Est. dividend yield	2.49%
Est. total return	44.75%

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

**Key Data**

Market share (HK\$ mn)	23,250
3-mth avg. daily turnover (HK\$ mn)	70
52-week high/low (HK\$)	3.21/1.39
Issued shares (mn)	9,728
Major shareholder(s) (%):	
Huaneng Group	54.0
Source(s): Company, Bloomberg, ABCI Securities	

**1H16 revenue breakdown (%)**

Wind power	91.9
Solar power	7.1
Others	1.0
Source(s): Company, ABCI Securities	

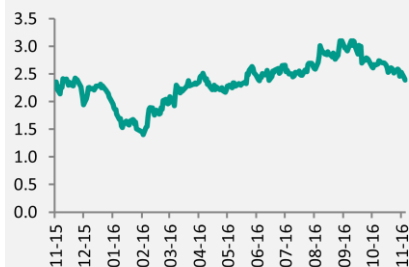
**Share performance (%)**

	Absolute	Relative*
1-mth	-9.33%	-8.51%
3-mth	-17.91%	-15.92%
6-mth	3.98%	-10.01%
12-mth	6.67%	12.74%

\*Relative to HSCEI

Source(s): Bloomberg, ABCI Securities

**1-Year stock performance**



Source(s): Bloomberg, ABCI Securities

# Huaneng Renewables (958 HK)

## A fast-growing giant-to-be

- Favored by the new policy, HNR's wind and solar power capacities would expand by 15% CAGR in 2015-20E.
- All-in unit capacity cost for wind power improved to RMB 7/W, meaning that HNR can expand its capacity with lower capex.
- Strong net profit growth of 37%/15%YoY in 2016E/17E would be supported by 13%/13%YoY wind capacity growth during the period.
- Reiterate **BUY**. Based on our DCF model, we set our TP at HK\$3.40, which represents 11x/10x 2016E/17E P/E and 1.5x/1.3x 2016E/17E P/B.

**HNR's capacity has room to grow.** Under the government's new policy approved in the National People's Congress in Mar 2016, non-hydro renewable energy (e.g. wind and solar) in each IPP will account for no less than 9% of total power generation by end-2020. HNR, as the key renewable energy arm of Huaneng Group (China's largest IPP) that controls 67% of renewable energy capacity in the latter, would need to boost its total capacity (wind and solar) from the current 10GW by end-2015 to no less than 20GW by end-2020, implying a 15% CAGR in 2015-20E.

**All-in unit capacity cost for wind power declined to RMB 7/W.** Based on our calculation, HNR's all-in unit capacity cost (construction and other costs) of wind power decreased from RMB 8/W in 2015 to RMB 7/W in 1H16. A lower unit cost should help HNR expand its capacity with less capex, which in turn would enable the Group to acquire better wind energy assets to secure future growth.

**Strong net profit growth of 37%/15%YoY in 2016E/17E can be expected.** HNR's 1H16 net profit represented 75% of Bloomberg's full-year consensus. Historically, HNR's 1H net profit contributed to 60% of its full-year total. Assuming a solid capacity growth of 13% YoY and a 6% YoY increment in utilization hour in 2016E, we expect HNR's net profit to go up by 37% YoY, to be followed by an 15% YoY growth in 2017E.

**Solar power business may be overhang.** According to the "Notice on Adjusting Tariff on New Energy (Draft for Soliciting Opinions)" issued by National Energy Administration (NEA) on 17 Oct 2016, NEA announced to revise down solar power tariff by 23-31% and effective on 1 Jan 2017. Given solar power business is current contributing around 7% of HNR's overall revenue in 1H16; we see the cut in solar power tariff should reduce HNR's 2016/17/18 net profit by 3%/5%/7% respectively.

**Reiterate BUY with TP at HK\$ 3.40.** Based on our DCF model we set our TP at HK\$3.40, equivalent to 11x/10x FY16E/17E P/E and 1.5x/1.3x FY16E/17E P/B. With HNR's solid capacity growth, improved utilization hour, low unit capacity cost and current attractive valuation (now trading at 8x/7x 2016/17E P/E), the counter is our Top Pick among wind power operators.

**Risks:** (1) Power curtailment risk; (2) Wind resources risk; (3) Tariff risk; (4) Construction risks; (5) Fundraising activities to finance upcoming projects.

**Results and Valuation**

FY ended Dec 31	2014A	2015A	2016E	2017E	2018E
Revenue (RMB mn)	6,151	7,357	9,191	10,435	11,661
Chg (% YoY)	4.1	19.6	24.9	13.5	11.7
Net profit (RMB mn)	1,121	1,860	2,539	2,913	3,337
Chg (% YoY)	22.8	65.9	36.5	14.7	14.6
EPS (RMB)	0.124	0.191	0.261	0.300	0.343
Chg (% YoY)	16.2	54.3	36.5	14.7	14.6
BVPS (RMB)	1.780	1.830	2.041	2.281	2.555
Chg (% YoY)	8.6	2.8	11.5	11.7	12.0
P/E (x)	16.92	10.97	8.03	7.00	6.11
P/B (x)	1.18	1.15	1.03	0.92	0.82
ROE (%)	6.96	10.45	12.79	13.13	13.43
ROA (%)	1.51	2.25	2.84	2.94	3.10
DPS (RMB)	0.022	0.030	0.052	0.060	0.069
Yield (%)	1.03	1.43	2.49	2.86	3.27
Net gearing* (%)	225.8	252.1	256.2	244.5	233.3

\*Net gearing=Net debt/Shareholder's equity

Source(s): Bloomberg, ABCI Securities estimates

## Key positives and future outlook

### HNR's total capacity growth to expand by 15% CAGR in 2015-20E

Under the government's new policy approved in the National People's Congress in Mar 2016, non-hydro renewable energy (e.g. wind and solar) in each IPP will account for no less than 9% of total power generation by end-2020. HNR, as the key renewable energy arm of Huaneng Group (China's largest IPP) that controls 67% of renewable energy capacity in the latter, would need to boost its total capacity (wind and solar) from the current 10GW by end-2015 to no less than 20GW by end-2020, implying a 15% CAGR in 2015-20E.

In April 2016, National Energy Administration announced a new policy stating that all coal-fire IPP groups (e.g. Huaneng, Datang, Huadian etc.) should further increase the proportion of renewable energy in the overall power generation from 9% to 15% by end-2020. Assuming that the mix of renewable energy increases to 15%, HNR would need to boost its capacity from 10GW by end-2015 to no less than 34GW by end-2020, representing a 27% CAGR in capacity over 2015-20E.

### Robust wind capacity growth of 13 YoY each in 2016E/17E

As of 1H16, HNR has a relatively small installed wind power capacity equivalent to 61% of Longyuan's (916 HK, BUY) installed capacity at 16,547MW. The low base, along with the urgency to expand non-hydro renewable energy capacity before 2020 by its parent company, would drive a double-digit capacity growth going forward. HNR's wind capacity increased by 0.3GW in 1H16 and will possibly expand by another 1GW in 2H16. Hence, total capacity growth in 2016E would be 13% YoY. In addition, management said, on an annual basis, HNR would allocate RMB 10bn for capacity expansion and build 1.4GW of new wind capacity; therefore, we expect capacity would expand by 13%YoY in 2017E.

### Robust wind power output growth suggests 33% YoY full-year growth target is achievable

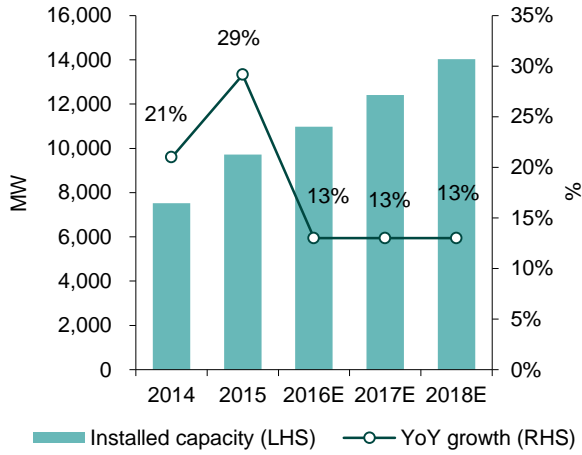
On 10 Nov 2016, HNR announced its October operation data which wind power output saw robust 30%YoY growth. This was mainly driven by 62%YoY growth in South region and 27%YoY growth in Northeast region, we see this is a result of strong capacity growth and increasing electricity direct sales. As of end-October 2016, HNR recorded 10-month total wind power output at 14,716GWh (+33%YoY) achieving 80% of our full-year target which inline with its historical run rate in the same period. This suggests our full-year 33%YoY robust wind power output growth is very likely to achieve.

### Strong net profit growth of 37%/15%YoY in 2016E/17E can be expected

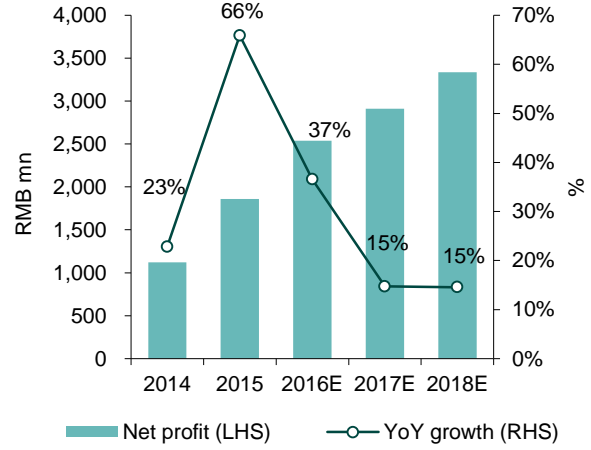
HNR's 1H16 net profit represented 75% of Bloomberg's full-year consensus. Historically, 1H net profit contributed to ~60% of its full-year total. Assuming a robust capacity growth of 13% YoY and a 6% YoY increment in utilization hour in 2016E, we expect HNR's net income to go up by 37% YoY, to be followed by an 15% YoY growth in 2017E.

### All-in unit capacity cost for wind power declined to RMB 7/W

Based on our calculation, HNR's all-in unit capacity cost (construction and other costs) of wind power decreased from RMB 8/W in 2015 to RMB 7/W in 1H16. The declining unit cost was driven by technology advancement and improving cost management. A lower unit cost should help HNR expand its capacity with less capex, which in turn would enable the Group to acquire better wind energy assets to secure future growth.

**Exhibit 16: HNR's installed capacity is likely to maintain a robust growth**


Source(s): Company data, ABCI Securities estimates

**Exhibit 17: Benefiting from robust capacity growth, HNR would achieve solid net profit growth**


Source(s): Company data, ABCI Securities estimates

## Major concerns

### **Solar power business may be overhang to HNR's future net profit growth**

According to the "Notice on Adjusting Tariff on New Energy (Draft for Soliciting Opinions)" issued by National Energy Administration (NEA) on 17 Oct 2016, NEA announced to revise down solar power tariff by 23%-31% and effective on 1 Jan 2017. Again, we believe this significant sharp fall in solar tariff was due to China government does not want to bear too much financial burden in subsidizing solar power (currently government has to subsidy RMB0.4/kWh for solar power, but RMB0.1/kWh for wind power and no subsidy for nuclear, coal-fire and hydro power).

We see this policy change should hit solar power industry hardly including both upstream and downstream players. Given solar power business is current contributing around 7% of HNR's overall revenue in 1H16; we see the cut in solar power tariff should reduce HNR's 2016/17/18 net profit by 3%/5%/7% respectively.

### **Wind power tariff may also see reduction after the solar power tariff cut**

Again, as we mentioned in our previous reports that China's wind power tariff should see long term down trend as government would like to reduce the production cost of renewable energy in order to make them in competing with traditional coal-fire energy in cost basis. We believe after the announcement of the "Notice on Adjusting Tariff on New Energy (Draft for Soliciting Opinions)" mentioned above, China government would also likely to issue wind power reduction announcement in near future which should have negative impact to net profit growth of wind power operators.

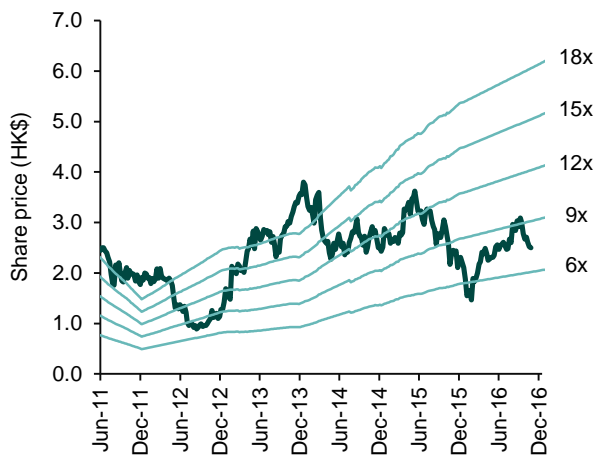
## Valuation

### Reiterate BUY; TP at HK\$3.40

We see solar power tariff cut and potential wind power tariff reduction should have negative impact to HNR's net profit going forward we therefore adjust our solar power segment assumptions as well as wind power tariff. However, we believe the new government policy should drive HNR's parent co. to expand renewable energy capacity before 2020, we expect HNR to continue enjoying the robust capacity growth going forward which should help its net profit growth recording robustly on 37%/15%YoY in 2016/17E. Our DCF-derived TP is HK\$ 3.40 (previously at HK\$4.30), implying 11x/10x 2016E/17E P/E and 1.5x/1.3x 2016E/17E P/B.

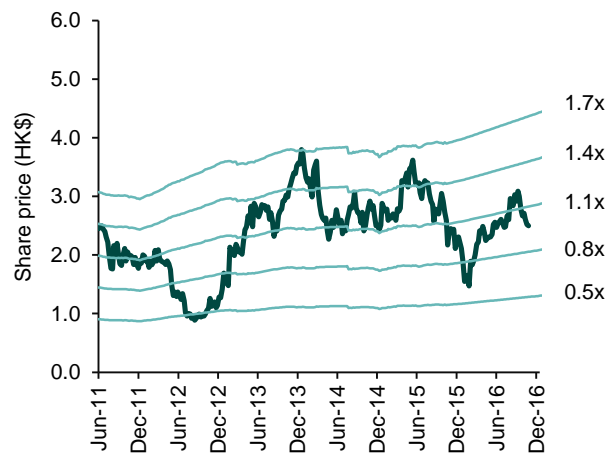
We believe HNR would achieve a 22% EPS CAGR in 2015-18E. Our TP is equivalent to 2017E PEG of 0.5, which we deem as attractive. To reiterate, we favor HNR based on 1) its capacity growth driven by policy demand; 2) improved utilization hour; 3) low unit capacity cost (at a similar level with the market leader Longyuan) that should allow the Group to achieve robust net profit growth; 4) the stock is now trading at 8x/7x 2016/17E P/E which at similar valuation as coal-fire IPPs where we see as very attractive. HNR remains our Top Pick among wind power operators. Reiterate **BUY**

Exhibit 2: HNR's fwd P/E chart



Source(s): Bloomberg, ABCI Securities estimates

Exhibit 3: HNR's fwd P/B chart



Source(s): Bloomberg, ABCI Securities estimates



Consolidated income statement (2014A-2018E)

FY Ended Dec 31 (RMB mn)	2014A	2015A	2016E	2017E	2018E
<b>Revenue</b>	<b>6,151</b>	<b>7,357</b>	<b>9,191</b>	<b>10,435</b>	<b>11,661</b>
Wind power	5,728	6,730	8,513	9,856	10,914
Solar power	386	604	676	576	744
Other	37	23	3	3	3
<b>COGS</b>	<b>-2,650</b>	<b>-3,214</b>	<b>-4,014</b>	<b>-4,543</b>	<b>-5,061</b>
<b>Gross profit</b>	<b>3,501</b>	<b>4,143</b>	<b>5,178</b>	<b>5,892</b>	<b>6,600</b>
SG&A	-187	-189	-184	-209	-233
Net financial income (cost)	-2,112	-2,073	-2,133	-2,375	-2,556
Other income and gains	30	160	-76	-113	-150
<b>Pre-tax profit</b>	<b>1,232</b>	<b>2,041</b>	<b>2,786</b>	<b>3,196</b>	<b>3,661</b>
Income tax	-86	-141	-195	-224	-256
<b>Net profit</b>	<b>1,147</b>	<b>1,899</b>	<b>2,591</b>	<b>2,972</b>	<b>3,405</b>
Profit attributable to:					
Minority interests	-26	-40	-52	-59	-68
<b>Equity shareholders of the Company</b>	<b>1,121</b>	<b>1,860</b>	<b>2,539</b>	<b>2,913</b>	<b>3,337</b>
<b>Basic EPS (RMB)</b>	<b>0.124</b>	<b>0.191</b>	<b>0.261</b>	<b>0.300</b>	<b>0.343</b>
<b>DPS (RMB)</b>	<b>0.022</b>	<b>0.030</b>	<b>0.052</b>	<b>0.060</b>	<b>0.069</b>

Source(s): Company, ABCI Securities estimates

Consolidated balance sheet (2014A-2018E)

As of Dec 31 (RMB mn)	2014A	2015A	2016E	2017E	2018E
<b>Current assets</b>	<b>11,141</b>	<b>7,652</b>	<b>7,998</b>	<b>9,787</b>	<b>10,607</b>
Cash and equivalent	7,786	4,504	3,433	4,603	4,815
Pledged and restricted bank deposits	2	27	0	0	0
Trade and bill receivables	3,160	2,900	4,281	4,860	5,431
Other receivables and prepayments	176	122	252	286	319
Inventories	13	43	33	37	42
Other current assets	4	56	0	0	0
<b>Non-current assets</b>	<b>62,997</b>	<b>74,901</b>	<b>81,456</b>	<b>89,350</b>	<b>96,890</b>
Property, plant and equipment	57,873	68,658	75,499	83,057	90,216
Investment properties	0	0	0	0	0
Intangible assets	696	682	674	666	659
Investment in JV and associates	112	109	79	79	79
Deferred tax assets	5	4	4	4	4
Other non-current assets	4,310	5,448	5,200	5,545	5,932
<b>Total assets</b>	<b>74,138</b>	<b>82,553</b>	<b>89,454</b>	<b>99,137</b>	<b>107,497</b>
<b>Current liabilities</b>	<b>25,741</b>	<b>28,533</b>	<b>30,712</b>	<b>34,400</b>	<b>36,835</b>
Trade and bill payables	0	0	0	0	0
Other payables	8,001	9,311	8,995	10,865	11,717
Short term borrowings	17,306	18,727	21,717	23,535	25,118
Other current liabilities	434	496	0	0	0
<b>Non-current liabilities</b>	<b>31,512</b>	<b>35,395</b>	<b>38,016</b>	<b>41,621</b>	<b>44,807</b>
Deferred tax liabilities	19	20	20	20	20
Long-term borrowings	26,842	30,677	32,575	35,303	37,678
Other non-current liabilities	4,651	4,698	5,420	6,298	7,110
<b>Total liabilities</b>	<b>57,253</b>	<b>63,928</b>	<b>68,728</b>	<b>76,021</b>	<b>81,643</b>
<b>Minority interests</b>	<b>784</b>	<b>827</b>	<b>878</b>	<b>938</b>	<b>1,006</b>
<b>Shareholders' equities</b>	<b>16,101</b>	<b>17,798</b>	<b>19,848</b>	<b>22,178</b>	<b>24,848</b>

Source(s): Company, ABCI Securities estimates



**Consolidated cash flow statement (2014A-2018E)**

<b>FY ended Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Profit before tax</b>	<b>1,147</b>	<b>1,899</b>	<b>2,591</b>	<b>2,972</b>	<b>3,405</b>
Change in depreciation and amortization	2,254	2,720	3,435	3,869	4,304
Change in working capital	689	967	-1,747	1,414	350
Net financial cost (income)	2,088	2,197	2,133	2,375	2,556
Income tax paid	-77	-126	-195	-224	-256
Net interest received	86	141	0	0	0
Others	-62	-116	0	0	0
<b>CF Operating</b>	<b>6,125</b>	<b>7,682</b>	<b>6,216</b>	<b>10,406</b>	<b>10,358</b>
Capex	-13,394	-12,644	-10,246	-11,395	-11,431
Increase in intangible assets	0	0	-22	-23	-24
Others	433	130	91	69	92
<b>CF Investing</b>	<b>-12,961</b>	<b>-12,514</b>	<b>-10,177</b>	<b>-11,350</b>	<b>-11,363</b>
Net Capital raise	1,358	0	0	0	0
Net debt financing	10,489	5,285	4,888	4,546	3,958
Dividend payout	-213	-214	-508	-583	-667
Interest paid	-2,228	-2,440	-2,242	-2,223	-2,443
Others	-517	-853	752	375	369
<b>CF Financing</b>	<b>8,889</b>	<b>1,778</b>	<b>2,890</b>	<b>2,115</b>	<b>1,217</b>
<b>Net change in cash</b>	<b>2,053</b>	<b>-3,054</b>	<b>-1,071</b>	<b>1,171</b>	<b>211</b>
Cash at the beginning	4,322	6,385	4,504	3,433	4,603
Adjustment (Time deposit & FX effect)	1,412	1,173	0	0	0
<b>Cash at the end</b>	<b>7,786</b>	<b>4,504</b>	<b>3,433</b>	<b>4,603</b>	<b>4,815</b>

Source(s): Company, ABCI Securities estimates

**Key Ratio (2014A-2018E)**

<b>FY ended Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Sales mixed (%)</b>					
Wind power	93.12	91.48	92.62	94.45	93.60
Solar power	6.28	8.21	7.35	5.52	6.38
Other	0.60	0.31	0.03	0.03	0.02
<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	56.92	56.31	56.33	56.47	56.60
Operating profit margin	54.39	55.95	53.51	53.38	53.31
Pre-tax margin	20.04	27.74	30.31	30.63	31.40
Net profit margin	18.64	25.82	28.19	28.48	29.20
Selling & administrative expenses/revenue	3.04	2.57	2.00	2.00	2.00
Effective tax rate	6.95	6.93	7.00	7.00	7.00
<b>Growth (%)</b>					
Revenue	4.10	19.60	24.94	13.53	11.75
Gross profit	6.50	18.33	24.98	13.80	12.01
Operating profit	19.80	23.03	19.49	13.26	11.60
Net profit	21.69	65.61	36.41	14.73	14.56
<b>Balance sheet ratios</b>					
Current ratio (x)	0.43	0.27	0.26	0.28	0.29
Quick ratio (x)	0.43	0.26	0.25	0.28	0.28
Cash ratio (x)	0.30	0.16	0.11	0.13	0.13
Trade and bill receivables days	187.53	143.88	170.00	170.00	170.00
Trade and bill payables turnover days	0.00	0.00	0.00	0.00	0.00
Inventory turnover days	1.81	4.88	3.00	3.00	3.00
Total debt / equity ratio (%)	274.19	277.59	273.54	265.29	252.72
Net debt / equity ratio (%)	225.82	252.13	256.24	244.54	233.34
<b>Returns (%)</b>					
ROAA	1.7	2.4	3.0	3.1	3.2
ROAE	7.4	11.0	13.5	13.9	14.2
Payout ratio	17.36	15.69	20.00	20.00	20.00

Source(s): Company, ABCI Securities estimates

## November 16, 2016 Company Report Rating: BUY TP: HK\$ 7.30

Share price (HK\$)	5.68
Est. share price return	28.52%
Est. dividend yield	1.73%
Est. total return	30.25%

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

### Key Data

Market share (HK\$m)	45,647
3-mth avg. daily turnover (HK\$ mn)	94
52-week high/low (HK\$)	7.30/3.60
Issued shares (mn)	8,036
Major shareholder(s) (%):	
Guodian Corp.	57.3

Source(s): Company, Bloomberg, ABCI Securities

### 1H16 revenue breakdown (%)

Wind power	63.9
Coal-fire power	12.6
Others	23.5

Source(s): Company, ABCI Securities

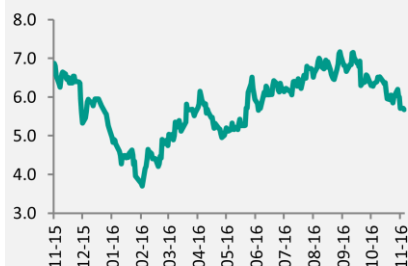
### Share performance (%)

	Absolute	Relative*
1-mth	-10.16%	-9.30%
3-mth	-17.39%	-15.37%
6-mth	10.94%	-3.02%
12-mth	-8.13%	-2.04%

\*Relative to HSCEI

Source(s): Bloomberg, ABCI Securities

### 1-Year stock performance



Source(s): Bloomberg, ABCI Securities

## Longyuan Power (916 HK)

### China's wind power leader

- Longyuan's wind capacity would grow by 12%/13% YoY in 2016E/17E.
- Diversified wind power assets should lower negative impact of transmission bottleneck from China's "3-North" regions
- 2016E/17E net profit would grow 22%/16% YoY growth.
- We maintain **BUY** with a DCF-derived TP of HK\$ 7.30, which represents 15x/13x 2016E/17E P/E and 1.3x/1.2x 2016E/17E P/B.

**Solid wind power capacity to expand by 12%/13% YoY in 2016E/17E.** Newly added capacity was 0.78GW in 1H16, and management said 0.8GW~1GW would be added in 2H16. We believe the Group's capacity will increase by 12% YoY in 2016. In addition, the Group targets to expand its wind capacity by 1.6GW~1.8GW over the next few years. With adequate cash on hand, we believe wind capacity would increase 13% YoY in 2017E.

**Diversified wind power assets to support utilization hour.** Longyuan's operational asset is well diversified. As of 1H16, capacity in the "3-North" region (includes Inner Mongolia, northeast and northwest China) accounted for 57% of overall capacity, lower than the peer average at 66%. Power curtailment in these regions should have a relatively lower negative impact to Longyuan's net profit.

**Increasing coal price may have negative impact to Longyuan's coal-fire power generation business.** As of 1H16, coal-fire power accounts for 10%/23% of Longyuan's overall capacity/total output and contributed 13% of Longyuan's overall revenue. However, China's domestic coal-fire has been maintaining strong rebound in 2016 which saw 99% increase year-to-date. We see a strong coal price should negatively impact Longyuan's coal-fire power generation business and become a drag to Longyuan's future net profit growth.

**Net profit growth of 22%/16% YoY in 2016E/17E is achievable.** Longyuan should benefit from China's expanding wind power output. As of 1H16, its net profit was equivalent to 65% of our 2016 full-year estimate. Based on Longyuan's historical net profit split of 60%/40% in 1H/2H, we believe it would achieve a net profit growth of its 22% YoY in 2016E. For 2017E, net profit would rise 16% YoY on 13% YoY on expanded wind capacity. The robust net profit growth would support Longyuan's share price

**BUY with TP at HK\$ 7.30.** Our DCF-derived TP was HK\$7.30, representing 15x/13x FY16E/17E P/E and 1.3x/1.2x FY16E/17E P/B. Recommend **BUY**.

**Risks:** (1) Power curtailment risk; (2) Wind resources risk; (3) Tariff risk; (4) Construction risks; (5) Fundraising activities to finance upcoming projects.

### Results and Valuation

FY ended Dec 31	2014A	2015A	2016E	2017E	2018E
Revenue (RMB mn)	18,228	19,649	22,374	24,958	27,273
Chg (% YoY)	-4.8	7.8	13.9	11.6	9.3
Net profit (RMB mn)	2,555	2,881	3,461	4,025	4,525
Chg (% YoY)	24.5	12.8	20.1	16.3	12.4
EPS (RMB)	0.318	0.358	0.431	0.501	0.563
Chg (% YoY)	24.7	12.7	20.2	16.3	12.4
BVPS (RMB)	4.120	4.369	4.741	5.142	5.592
Chg (% YoY)	7.0	6.0	8.5	8.5	8.8
P/E (x)	15.76	13.98	11.63	10.00	8.90
P/B (x)	1.22	1.15	1.06	0.97	0.90
ROE (%)	7.72	8.20	9.08	9.74	10.07
ROA (%)	2.06	2.16	2.37	2.54	2.69
DPS (RMB)	0.060	0.072	0.086	0.100	0.113
Yield (%)	1.19	1.43	1.72	2.00	2.25
Net gearing* (%)	203.0	203.3	201.6	196.4	189.1

\*Net gearing=Net debt/Shareholder's equity

Source(s): Bloomberg, ABCI Securities estimates



## Key positives and future outlook

### **Robust wind power capacity growth of 12%/13%YoY in 2016E/17E**

Newly added capacity was 0.78GW in 1H16 and management is confident in increasing by another 0.8GW~1GW in 2H16. We believe the Group's capacity will expand by 12% YoY in 2016E. In addition, the Group targets to expand its wind capacity by 1.6GW~1.8GW over the next few years. With adequate cash on hand, we believe the Group is likely to raise its wind capacity by 13% YoY in 2017E.

### **All-in unit capacity cost at RMB 7/W- a boon to future growth**

Longyuan's all-in wind power unit capacity cost in 1H16 was RMB 7/W, similar to that in 2015 and was ~22% lower than the industry average of RMB 9/W. A low all-in unit cost presents a significant advantage over peers as the Group can expand capacity with less capex.

### **Diversified wind power facilities to support utilization hour**

Longyuan's wind power facilities are well diversified and this helps the Group attain a higher utilization hour due to reduced negative impact of power curtailment from the "3-North" regions (includes Inner Mongolia, northeast and northwest China). As of 1H16, capacity in the "3-North" region accounted for 57% of overall capacity, lower than the peer average at 66%. Power curtailment in these regions should have a relatively lower impact on the Group's net profit.

### **A market leader to benefit from supportive policies.**

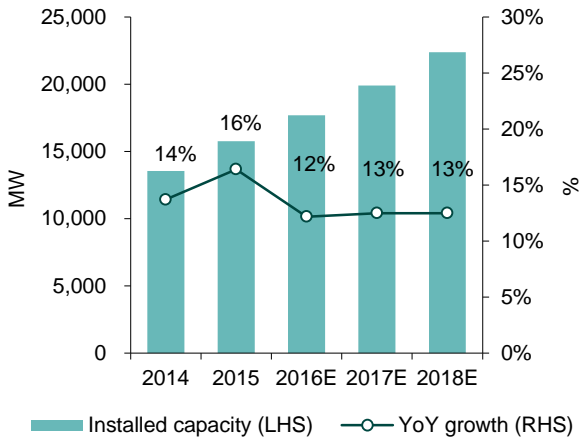
Longyuan is the largest wind power generator in China with 15,765 MW of installed wind power capacity in 2015, equivalent to 12% of total China's total. Its wind power output reached 25,709 GWh in 2015, contributing to 14% of national wind power generation, the highest in China. Its leading position means the Group is likely to benefit from favorable policies and accelerating development of wind power in China.

### **Lowest net gearing ratio among peers**

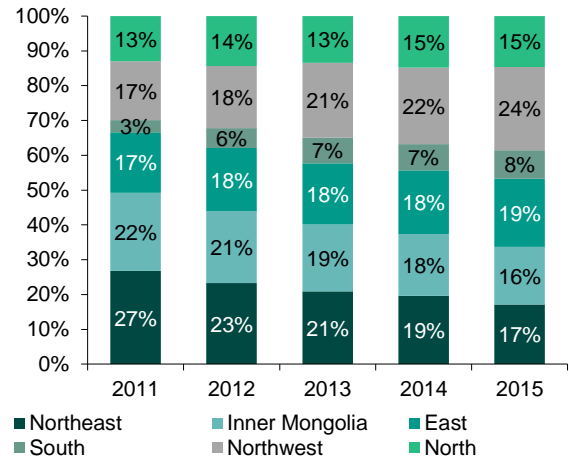
Wind power industry is capital-intensive. The Group has the lowest net gearing ratio among wind operators in our alternative energy coverage universe, partially thanks to its competitive facility portfolio and leading position in the industry. As of 1H16, its net gearing ratio was 198%, much lower than the 243%, in Huaneng Renewables (958 HK, BUY) and 364% in Datang Renewable (1798 HK, HOLD). The low gearing suggests a higher capability in capacity expansion, and the lower financial burden would reduce its sensitivity to interest rate fluctuations. A healthy balance sheet also implies a lower financing cost for new loans.

### **Net profit growth of 22%/16%YoY in 2016E/17E is achievable.**

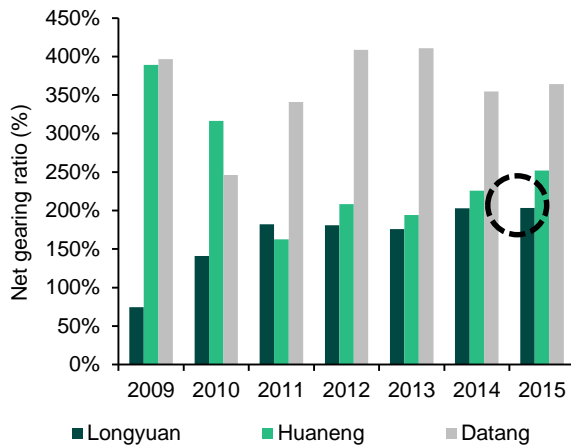
Longyuan should benefit from China's expanding wind power output. As of 1H16, its net profit was equivalent to 65% of our 2016 full-year estimate. Based on Longyuan's historical net profit split of 60%/40% in 1H/2H, we believe it would achieve a net profit growth of its 22%YoY in 2016E. For 2017E, net profit would rise 16%YoY on 13%YoY on expanded wind capacity. The robust net profit growth would support Longyuan's share price.

**Exhibit 20: Longyuan's installed wind capacity growth should maintain a double-digit going forward**


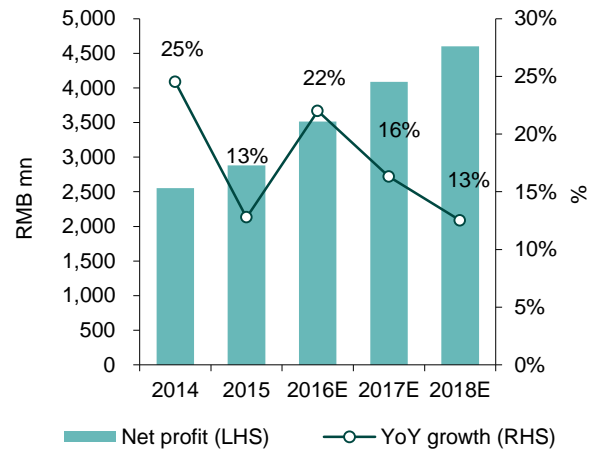
Source(s): Company data, ABCI Securities estimates

**Exhibit 21: Longyuan's wind power installed capacity is well diversified**


Source(s): Company data, ABCI Securities

**Exhibit 22: Longyuan has the lowest net gearing ratio among peers**


Source(s): Company data, ABCI Securities

**Exhibit 23: Longyuan's net profit growth should remain solid in the next few years**


Source(s): Company data, ABCI Securities estimates

## Major concerns

### **Wind power tariff may also see reduction after the solar power tariff cut**

We see China's wind power tariff should see long term down trend as government would like to reduce the production cost of renewable energy in order to make them in competing with traditional coal-fire energy in cost basis. We believe after the announcement of the "Notice on Adjusting Tariff on New Energy (Draft for Soliciting Opinions)" mentioned before, China government would also likely to issue wind power reduction announcement in near future which should have negative impact to net profit growth of wind power operators.

### **Increasing coal price may have negative impact to Longyuan's coal-fire power generation business**

Despite Longyuan concentrates in wind power operation and being as China's biggest wind power operator in capacity basis, Longyuan still have coal-fire power generation business. As of 1H16, coal-fire power accounts for 10%/23% of Longyuan's overall capacity/total output and contributed 13% of Longyuan's overall revenue. However, China's domestic coal-fire has been maintaining strong rebound in 2016 which saw 99% increase year-to-date. We see a strong coal price should negatively impact Longyuan's coal-fire power generation business and become a drag to Longyuan's future net profit growth.

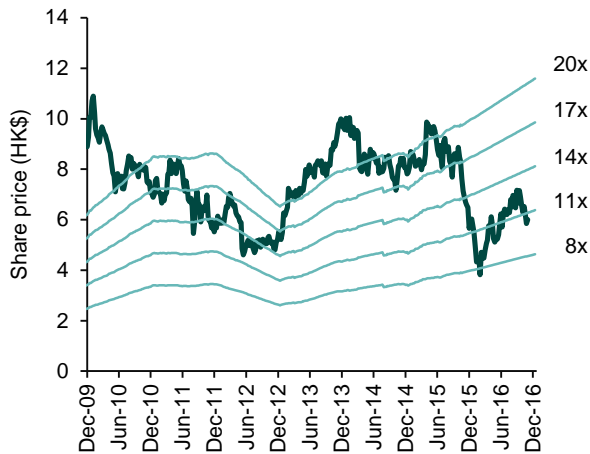
## Valuation

### Maintain BUY, TP at HK\$7.30

We revise down Longyuan's wind power tariff and coal-fire power generation business on the back of possible tariff reduction and coal price rebound. However, we expect Longyuan should continue recording robust 22%/16%YoY net profit growth on the back of solid wind capacity growth and high utilization hour. Our DCF-derived TP is HK\$7.30 (previously at HK\$8.20), implying 15x/13x 2016E/17E PE and 1.3x/1.2x 2016E/17E P/B.

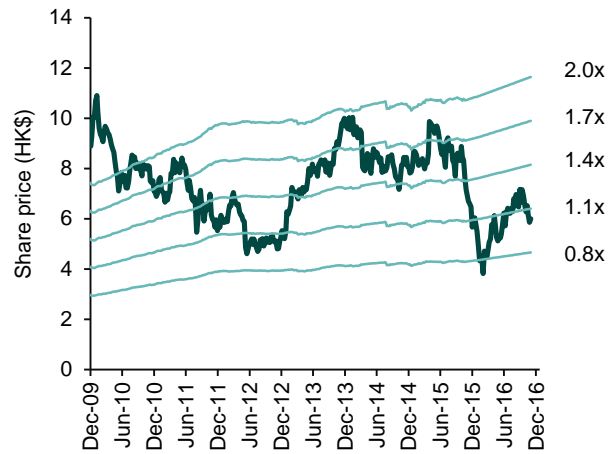
We believe Longyuan would achieve a 17% EPS CAGR in 2015-18E. Our TP is equivalent to 2017E PEG of 0.8, which is inexpensive in our view. To reiterate, Longyuan's low unit all-in capacity cost should help the Group expand business at a lower cost and its diversified facilities should help support a higher utilization hour by limiting exposure to power curtailment. Maintain **BUY**.

Exhibit 24: Longyuan's fwd P/E chart



Source(s): Bloomberg, ABCI Securities estimates

Exhibit 25: Longyuan's fwd P/B chart



Source(s): Bloomberg, ABCI Securities estimates

**Consolidated income statement (2014A-2018E)**

<b>FY Ended Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Revenue</b>	<b>18,228</b>	<b>19,649</b>	<b>22,374</b>	<b>24,958</b>	<b>27,273</b>
Wind power	11,154	12,331	13,922	15,757	17,463
Coal-fire power	6,156	5,896	6,941	7,531	7,992
Other	919	1,422	1,511	1,670	1,818
<b>COGS</b>	<b>-11,249</b>	<b>-12,017</b>	<b>-13,886</b>	<b>-15,301</b>	<b>-16,610</b>
<b>Gross profit</b>	<b>6,980</b>	<b>7,632</b>	<b>8,488</b>	<b>9,657</b>	<b>10,663</b>
SG&A	-378	-370	-447	-499	-545
Net financial income (cost)	-2,960	-3,025	-3,196	-3,436	-3,618
Other income and gains	413	439	618	630	642
<b>Pre-tax profit</b>	<b>4,055</b>	<b>4,676</b>	<b>5,462</b>	<b>6,352</b>	<b>7,141</b>
Income tax	-510	-600	-655	-762	-857
<b>Net profit</b>	<b>3,545</b>	<b>4,076</b>	<b>4,807</b>	<b>5,590</b>	<b>6,284</b>
Profit attributable to:					
Minority interests	-990	-1,196	-1,202	-1,397	-1,571
<b>Equity shareholders of the Company</b>	<b>2,555</b>	<b>2,881</b>	<b>3,461</b>	<b>4,025</b>	<b>4,525</b>
<b>Basic EPS (RMB)</b>	<b>0.318</b>	<b>0.358</b>	<b>0.431</b>	<b>0.501</b>	<b>0.563</b>
<b>DPS (RMB)</b>	<b>0.060</b>	<b>0.072</b>	<b>0.086</b>	<b>0.100</b>	<b>0.113</b>

Source(s): Company, ABCI Securities estimates

**Consolidated balance sheet (2014A-2018E)**

<b>As of Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Current assets</b>	<b>14,795</b>	<b>12,697</b>	<b>16,184</b>	<b>19,793</b>	<b>20,234</b>
Cash and equivalent	2,396	2,887	3,812	6,172	5,491
Pledged and restricted bank deposits	440	387	387	387	387
Trade and bill receivables	6,416	4,238	6,130	6,838	7,472
Other receivables and prepayments	4,102	3,069	3,678	4,103	4,483
Inventories	1,017	1,081	1,141	1,258	1,365
Other current assets	425	1,036	1,036	1,036	1,036
<b>Non-current assets</b>	<b>109,018</b>	<b>120,776</b>	<b>129,603</b>	<b>138,561</b>	<b>147,670</b>
Property, plant and equipment	88,555	98,609	106,081	113,859	121,548
Investment properties	5	5	5	5	5
Intangible assets	8,542	8,699	8,919	9,145	9,376
Investment in JV and associates	3,602	4,822	5,493	6,242	7,060
Deferred tax assets	155	155	155	155	155
Other non-current assets	8,159	8,486	8,950	9,155	9,525
<b>Total assets</b>	<b>123,813</b>	<b>133,473</b>	<b>145,787</b>	<b>158,354</b>	<b>167,904</b>
<b>Current liabilities</b>	<b>46,328</b>	<b>55,647</b>	<b>61,326</b>	<b>66,609</b>	<b>69,698</b>
Trade and bill payables	1,021	1,902	1,902	2,096	2,275
Other payables	9,188	9,057	10,808	11,894	12,897
Short term borrowings	36,114	44,688	48,617	52,619	54,525
Other current liabilities	6	0	0	0	0
<b>Non-current liabilities</b>	<b>36,581</b>	<b>33,293</b>	<b>35,734</b>	<b>38,402</b>	<b>39,673</b>
Deferred tax liabilities	107	106	106	106	106
Long-term borrowings	33,922	29,970	32,411	35,079	36,350
Other non-current liabilities	2,552	3,217	3,217	3,217	3,217
<b>Total liabilities</b>	<b>82,909</b>	<b>88,940</b>	<b>97,060</b>	<b>105,011</b>	<b>109,370</b>
<b>Minority interests</b>	<b>7,797</b>	<b>6,433</b>	<b>7,635</b>	<b>9,032</b>	<b>10,603</b>
<b>Perpetual medium-term note</b>	<b>0</b>	<b>2,991</b>	<b>2,991</b>	<b>2,991</b>	<b>2,991</b>
<b>Shareholders' equities</b>	<b>33,107</b>	<b>35,109</b>	<b>38,101</b>	<b>41,320</b>	<b>44,940</b>

Source(s): Company, ABCI Securities estimates

**Consolidated cash flow statement (2014A-2018E)**

<b>FY ended Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Profit before tax</b>	<b>4,055</b>	<b>4,676</b>	<b>5,462</b>	<b>6,352</b>	<b>7,141</b>
Change in depreciation and amortization	5,011	5,554	6,454	7,102	7,774
Change in working capital	1,973	4,175	-812	31	61
Net financial cost (income)	2,895	2,671	3,065	3,150	3,318
Income tax paid	-522	-525	-1,196	-1,202	-1,397
Net interest received	0	0	0	0	0
Others	-531	-227	-671	-749	-818
<b>CF Operating</b>	<b>12,881</b>	<b>16,325</b>	<b>12,303</b>	<b>14,683</b>	<b>16,079</b>
Capex	-18,273	-15,264	-13,446	-14,370	-14,922
Increase in intangible assets	0	0	-701	-736	-772
Others	-2,591	-1,055	204	164	210
<b>CF Investing</b>	<b>-20,864</b>	<b>-16,319</b>	<b>-13,943</b>	<b>-14,942</b>	<b>-15,485</b>
Net Capital raise	0	0	0	0	0
Net debt financing	12,035	4,837	6,370	6,670	3,176
Dividend payout	-1,042	-1,174	-576	-692	-805
Interest paid	-3,385	-3,368	-3,228	-3,360	-3,646
Others	45	212	0	0	0
<b>CF Financing</b>	<b>7,653</b>	<b>507</b>	<b>2,565</b>	<b>2,619</b>	<b>-1,275</b>
<b>Net change in cash</b>	<b>-330</b>	<b>513</b>	<b>925</b>	<b>2,360</b>	<b>-681</b>
Cash at the beginning	2,732	2,396	2,887	3,812	6,172
Adjustment (Time deposit & FX effect)	-6	-22	0	0	0
<b>Cash at the end</b>	<b>2,396</b>	<b>2,887</b>	<b>3,812</b>	<b>6,172</b>	<b>5,491</b>

Source(s): Company, ABCI Securities estimates

**Key Ratio (2014A-2018E)**

<b>FY ended Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Sales mixed (%)</b>					
Wind power	61.19	62.76	62.22	63.13	64.03
Coal-fire power	33.77	30.01	31.02	30.18	29.31
Other	5.04	7.24	6.75	6.69	6.66
<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	38.29	38.84	37.94	38.69	39.10
Operating profit margin	35.99	36.26	35.70	36.22	36.45
Pre-tax margin	22.25	23.80	24.41	25.45	26.18
Net profit margin	19.45	20.75	21.48	22.40	23.04
Selling & administrative expenses/revenue	2.07	1.88	2.00	2.00	2.00
Effective tax rate	12.59	12.83	12.00	12.00	12.00
<b>Growth (%)</b>					
Revenue	-4.80	7.79	13.87	11.55	9.27
Gross profit	0.31	9.34	11.22	13.77	10.42
Operating profit	9.15	8.61	12.09	13.18	9.98
Net profit	19.25	15.01	17.92	16.28	12.43
<b>Balance sheet ratios</b>					
Current ratio (x)	0.32	0.23	0.26	0.30	0.29
Quick ratio (x)	0.20	0.13	0.17	0.20	0.19
Cash ratio (x)	0.06	0.06	0.07	0.10	0.08
Trade and bill receivables days	128.36	78.72	100.00	100.00	100.00
Trade and bill payables turnover days	33.12	57.78	50.00	50.00	50.00
Inventory turnover days	33.00	32.82	30.00	30.00	30.00
Total debt / equity ratio (%)	211.54	195.95	197.19	197.91	189.59
Net debt / equity ratio (%)	202.98	203.32	201.65	196.37	189.13
<b>Returns (%)</b>					
ROAA	2.2	2.2	2.5	2.6	2.8
ROAE	8.0	8.4	9.5	10.1	10.5
Payout ratio	18.78	20.00	20.00	20.00	20.00

Source(s): Company, ABCI Securities estimates

## November 16, 2016 Company Report Rating: HOLD TP: HK\$ 0.82

Share price (HK\$)	0.73
Est. share price return	12.33%
Est. dividend yield	1.59%
Est. total return	13.92%

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

### Key Data

Market share (HK\$mn)	5,310
3-mth avg. daily turnover (HK\$ mn)	1.4
52-week high/low (HK\$)	0.98/0.69
Issued shares (mn)	7,274
Major shareholder(s) (%):	
Datang Group	57.40

Source(s): Company, Bloomberg, ABCI Securities

### 1H16 revenue breakdown (%)

Electricity	98.5
Service revenue	0.7
Others	0.8

Source(s): Company, ABCI Securities

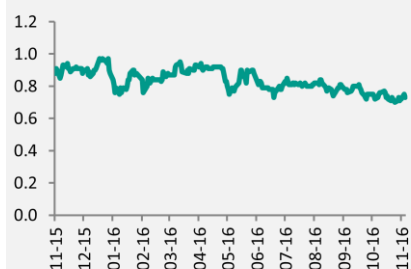
### Share performance (%)

	Absolute	Relative*
1-mth	2.74%	3.58%
3-mth	-10.71%	-8.71%
6-mth	-2.60%	-16.57%
12-mth	-13.79%	-7.71%

\*Relative to HSCEI

Source(s): Bloomberg, ABCI Securities

### 1-Year stock performance



Source(s): Bloomberg, ABCI Securities

## China Datang Renewable (1798 HK) Primed to be a key beneficiary to slightest improvement

- A relatively low wind power capacity and a high net gearing ratio means Datang Renewable (DTR) would be highly sensitive to any fundamental changes
- Current 2016E P/B is trading at below 0.5x, which is inexpensive
- High net gearing increases the likelihood of fundraising activities
- Based on our DCF model, we set our TP at HK\$ 0.82, representing 13x/8x 2016/17E P/E and 0.4x/0.4x 2016/17E P/B. Recommend **HOLD**

**A highly sensitive play.** DTR has a relatively small wind capacity which is equivalent to 43% of Longyuan's capacity in 1H16. A small capacity increment would lead to a noticeable increase in DTR's earnings given its low capacity base. In addition, its high gearing ratio means earnings are highly sensitive to changes in utilization hour and capacity. Based on our estimates, for a 1% increase in utilization hour, 2016E/17E earnings would increase by 9%/8%; a 1% increase in installed capacity would drive up 2016E/17E earnings by 9%/7%. We believe this highly leveraged player will be the largest beneficiary of reduced wind power curtailment.

**Current valuation at <0.5x 2016E P/B is attractive.** The stock is currently trading at 0.40x 2016E P/B, the lowest since its listing in 2010 (previous low: 0.46x P/B in Sep 2012). We believe the current share price, which presents a more than 50% discount DTR's book value, may fully reflect the negative and downside risk is limited.

**High net gearing ratio prompts fundraising concern.** DTR's net gearing ratio was 364% by 1H16, compared to Longyuan's 198% and Huaneng Renewables' 243%. The high net gearing ratio may necessitate fundraising in future.

**Declining power tariff should hit DTR the hardest.** China's wind power tariff would maintain a downtrend going forward. Given DTR'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, DTR's 2016/17E net profit would drop by 11% and 9%.

**HOLD with TP at HK\$0.82.** Our DCF-derived TP was HK\$0.82, representing 13x/8x FY16E/17E P/E and 0.4x/0.4x FY16E/17E P/B. Maintain **HOLD**.

Risks: (1) Power curtailment risk; (2) Wind resources risk; (3) Tariff risk; (4) Construction risks; (5) Fundraising activities to finance future projects.

### Results and Valuation

FY ended Dec 31	2014A	2015A	2016E	2017E	2018E
Revenue (RMB mn)	5,186	5,588	6,055	6,994	7,600
Chg (% YoY)	-7.9	7.8	8.4	15.5	8.7
Net profit (RMB mn)	-150	14	367	587	633
Chg (% YoY)	n.a.	n.a.	2,578.6	59.9	7.8
EPS (RMB)	-0.02	0.00	0.05	0.08	0.09
Chg (% YoY)	n.a.	n.a.	2,578.6	59.9	7.8
BVPS (RMB)	1.50	1.49	1.56	1.62	1.69
Chg (% YoY)	17.3	-0.4	4.2	4.2	4.3
P/E (x)	n.a.	332.47	12.41	7.76	7.20
P/B (x)	0.42	0.42	0.41	0.39	0.37
ROE (%)	-1.37	0.13	3.27	5.02	5.19
ROA (%)	-0.25	0.02	0.57	0.85	0.86
DPS (RMB)	0.000	0.000	0.010	0.016	0.018
Yield (%)	0.00	0.00	1.61	2.58	2.78
Net gearing* (%)	354.5	364.3	385.5	400.1	405.8

\*Net gearing=Net debt/Shareholder's equity

Source(s): Bloomberg, ABCI Securities estimates

## 1H16 results highlight

DTR's 1H16 net profit was RMB212mn (+0.1% YoY), equivalent to 39% of our 2016E full-year estimate. Historically, DTR's 1H contributed 60% of full-year net profit on average. Hence, 1H16 results were worse than expected.

### **Robust capacity growth of 15% YoY accompanied by 6% YoY decline in wind power utilization hour**

DTR's wind power capacity expanded by 15% YoY in 1H16, but the gains were eradicated by the 6%YoY decline in utilization hour, dragging down net profit growth to 0.1% YoY. DTR had a high exposure in China's "3-North" regions (i.e. northeast/northwest China and Inner Mongolia, where power curtailment was serious), with 77% of the Group's capacity was located in these regions as of 1H16.

### **9%YoY decline in solar power utilization hour offset gains from 17% YoY expansion in solar power capacity**

DTR's solar power operation recorded a poor utilization hour due to the less-than-ideal location of its facilities. As of 1H16, 72% of DTR's solar power assets were located in the "3-North" regions where power curtailment was severe enough to drag down utilization hour.

### **1H16 net gearing was 364%, which prompts fundraising concerns**

DTR's net gearing ratio in 1H16 remained high at 364% (2015: 364%). This was partially a result of capacity expansion (+15% YoY) and the low return (1H16 net profit: +0.1% YoY). We believe net gearing ratio would remain high and the Group may require debt or equity financing in the near future.



Results summary		1H15	1H16	YoY
<b>Income Statement</b>				
Revenue	RMBmn	2,914	2,981	2%
Sales of electricity	RMBmn	2,879	2,935	2%
Service revenue	RMBmn	17	26	51%
Others	RMBmn	17	19	11%
Op. profit	RMBmn	1,313	1,195	-9%
Net profit	RMBmn	212	212	0%
Basic EPS	RMB	0.03	0.03	0%
<b>Ratios</b>				
Op. margin	%	45.1%	40.1%	-5ppt
Net margin	%	7.3%	7.1%	0ppt
Net gearing/(Net cash)	%	342%	364%	21ppt
<b>Wind power</b>				
Installed capacity	MW	6,217	7,127	15%
Gross generation	GWh	5,814	6,193	7%
Utilization hour	Hours	984	921	-6%
<b>Solar power</b>				
Installed capacity	MW	117	137	17%
Gross generation	GWh	99	91	-9%
Utilization hour	Hours	846	766	-9%

Source(s): Company data

## Key positives and future outlook

### A highly sensitive play

As of 1H16, DTR had a relatively small wind capacity equivalent to 43% of the market leader Longyuan's. A small capacity increment would boost DTR's net profit given its low capacity base. In addition, its high gearing ratio means its earnings are highly sensitive to changes in utilization hour and capacity. Based on our estimates, for every 1% increase in utilization hour, 2016E/17E earnings will increase by 9%/8%; a 1% increase in installed capacity would boost 2016E/17E earnings by 9%/7%. Hence, we believe this highly leveraged player will be the most sensitive to changes in wind power curtailment.

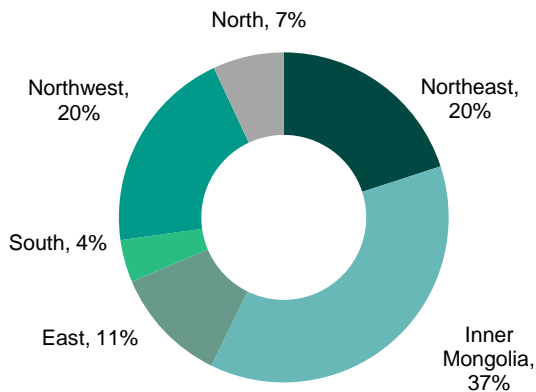
### High exposure in northern China; ample room to expand in the south

As of 1H16, Inner Mongolia, northeast and northwest China accounted for 37%, 20% and 20% of the Group's total installed capacity, meaning that 77% the Group's installed capacity were located in the "3-North" regions, the highest in our coverage universe. To improve its utilization hour, DTR may consider expanding its capacity in southern China.

### Current valuation at <0.5x 2016E P/B is attractive

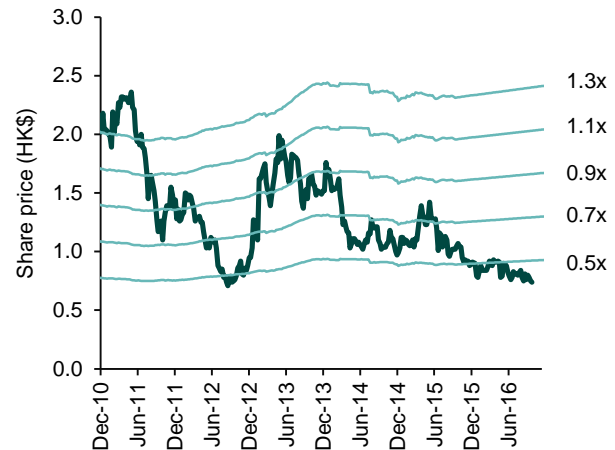
DTR's thin margin and low utilization hour means net profit can easily swing to loss and trigger a de-rating. The stock is currently trading at 0.40x 2016E P/B, the lowest since its 2010 listing (the previous lowest point is 0.46x in Sep 2012). We believe the current share price, which presents a more than 50% discount to DTR's book value, may have fully priced in the and therefore downside risk is limited.

**Exhibit 26: Over 75% of Datang's capacity is located in China's "3-North" regions**



Source(s): Company data, ABCI Securities

**Exhibit 27: DTR's current valuation at trough presents limited downside risk**



Source(s): Company data, ABCI Securities estimates

## Major concerns

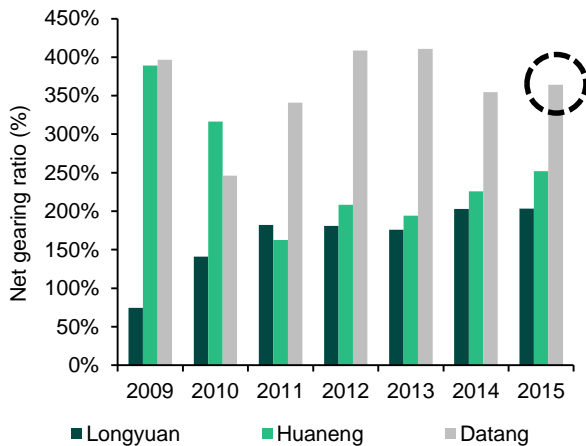
### High net gearing ratio prompts fundraising concern

DTR's net gearing ratio was 364% by 1H16, compared to Longyuan's 198% and Huaneng Renewables' 243%. 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.

### Declining power tariff should hit DTR the hardest

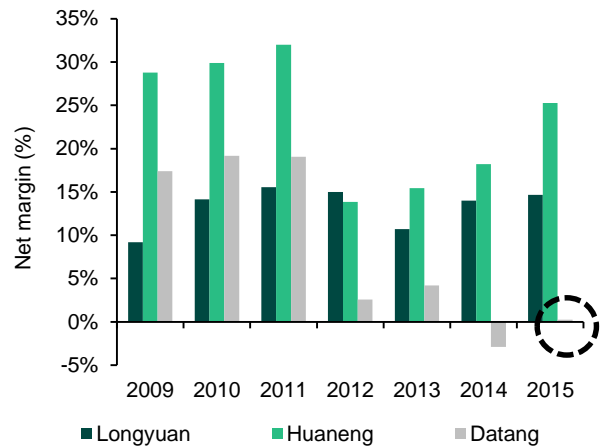
China's wind power tariff would maintain a downtrend going forward due to: 1). A lower wind power tariff should encourage more users to switch from traditional coal-fire energy to wind energy; 2). China would like to reduce the financial burden of industrial companies to boost the sluggish industrial production. Given DTR's thin net margin that is the lowest in our wind power universe, it would suffer the most from the declining wind power tariff. Based on our estimates, for every 1% decline in wind power tariff, DTR's 2016E/17E net profit would fall by 11% and 9%.

**Exhibit 28: DTR has the highest net gearing ratio among peers**



Source(s): Company data, ABCI Securities

**Exhibit 29: DTR's thin net margin makes it highly sensitive to any fundamental changes**



Source(s): Company data, ABCI Securities

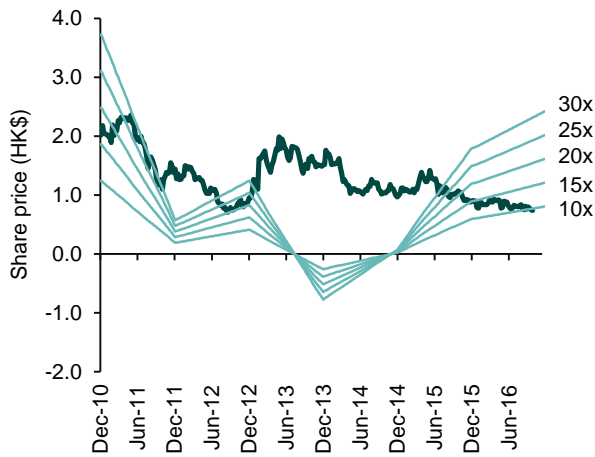
## Valuation

### Maintain HOLD; TP at HK\$0.82

DTR's 1H16 results were worse-than-expected. Hence, we adjust our operating assumptions and expect 2016E net profit to be RMB 367mn (2015: RMB 14mn), and 2017E/18E net profit growth would be 60%/8%YoY. We roll over our valuation basis from 2016 to 2017 and our DCF-derived TP is HK\$ 0.82 (previously at HK\$ 0.80), implying 13x/8x 2016E/17E PE and 0.4x/0.4x 2016E/17E P/B.

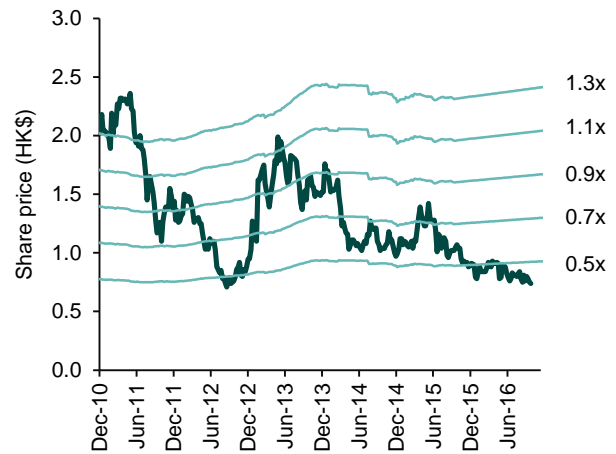
We see DTR's assets are not as well located as those of HNR (958 HK, BUY) and Longyuan (916HK, BUY). Also, its high net gearing may necessitate fundraising activities. Its current P/B ratio is at a historical low, presenting limited downside. Moreover, its high sensitivity to operational changes means that any improvement (increased utilization hour, improvement in wind resources, decline in interest rate decline etc.) may result in noticeably higher earnings. Maintain **HOLD**.

Exhibit 30: DTR's fwd P/E chart



Source(s): Bloomberg, ABCI Securities estimates

Exhibit 31: DTR's fwd P/B chart



Source(s): Bloomberg, ABCI Securities estimates

**Consolidated income statement (2014A-2018E)**

<b>FY Ended Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Revenue</b>	<b>5,186</b>	<b>5,588</b>	<b>6,055</b>	<b>6,994</b>	<b>7,600</b>
Wind	4,985	5,127	5,931	6,914	7,521
Concession construction	8	247	0	0	0
Others	193	214	124	80	78
<b>COGS</b>	<b>-2,941</b>	<b>-3,361</b>	<b>-3,547</b>	<b>-3,949</b>	<b>-4,317</b>
<b>Gross profit</b>	<b>2,245</b>	<b>2,227</b>	<b>2,508</b>	<b>3,045</b>	<b>3,282</b>
SG&A	0	0	0	0	0
Net financial income (cost)	-2,234	-1,939	-1,797	-1,961	-2,112
Other income and gains	-72	-133	-151	-189	-205
<b>Pre-tax profit</b>	<b>-62</b>	<b>155</b>	<b>560</b>	<b>895</b>	<b>965</b>
Income tax	-66	-92	-101	-161	-174
<b>Net profit</b>	<b>-128</b>	<b>63</b>	<b>459</b>	<b>734</b>	<b>792</b>
Profit attributable to:					
Minority interests	-23	-49	-92	-147	-158
<b>Equity shareholders of the Company</b>	<b>-150</b>	<b>14</b>	<b>367</b>	<b>587</b>	<b>633</b>
<b>Basic EPS (RMB)</b>	<b>-0.021</b>	<b>0.002</b>	<b>0.051</b>	<b>0.081</b>	<b>0.088</b>
<b>DPS (RMB)</b>	<b>0.000</b>	<b>0.000</b>	<b>0.010</b>	<b>0.016</b>	<b>0.018</b>

Source(s): Company, ABCI Securities estimates

**Consolidated balance sheet (2014A-2018E)**

<b>As of Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Current assets</b>	<b>6,683</b>	<b>3,609</b>	<b>3,192</b>	<b>3,346</b>	<b>4,126</b>
Cash and equivalent	2,190	1,078	489	225	735
Pledged and restricted bank deposits	350	5	0	0	0
Trade and bill receivables	3,279	1,337	1,576	1,820	1,978
Other receivables and prepayments	828	1,141	1,078	1,246	1,353
Inventories	35	48	49	54	59
Other current assets	0	0	0	0	0
<b>Non-current assets</b>	<b>53,427</b>	<b>57,205</b>	<b>61,283</b>	<b>65,695</b>	<b>69,449</b>
Property, plant and equipment	48,783	52,523	56,332	60,455	63,983
Lease prepayment	0	0	0	0	0
Intangible assets	1,016	1,269	1,256	1,243	1,231
Investment in JV and associates	667	660	660	660	660
Deferred tax assets	38	35	35	35	35
Other non-current assets	2,923	2,719	3,001	3,302	3,541
<b>Total assets</b>	<b>60,110</b>	<b>60,815</b>	<b>64,475</b>	<b>69,041</b>	<b>73,575</b>
<b>Current liabilities</b>	<b>10,951</b>	<b>17,062</b>	<b>19,274</b>	<b>20,945</b>	<b>22,551</b>
Trade and bill payables	434	1,318	1,263	1,406	1,538
Other payables	4,294	5,170	4,886	5,437	5,942
Short term borrowings	6,223	10,574	13,125	14,101	15,071
Other current liabilities	0	0	0	0	0
<b>Non-current liabilities</b>	<b>35,510</b>	<b>30,173</b>	<b>31,073</b>	<b>33,352</b>	<b>35,615</b>
Deferred tax liabilities	29	26	26	26	26
Long-term borrowings	35,020	29,724	30,624	32,902	35,166
Other non-current liabilities	461	423	423	423	423
<b>Total liabilities</b>	<b>46,462</b>	<b>47,235</b>	<b>50,347</b>	<b>54,296</b>	<b>58,166</b>
<b>Minority interests</b>	<b>2,730</b>	<b>2,814</b>	<b>2,905</b>	<b>3,052</b>	<b>3,211</b>
<b>Shareholders' equities</b>	<b>10,918</b>	<b>10,765</b>	<b>11,223</b>	<b>11,692</b>	<b>12,199</b>

Source(s): Company, ABCI Securities estimates

**Consolidated cash flow statement (2014A-2018E)**

<b>FY ended Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Profit before tax</b>	<b>-62</b>	<b>155</b>	<b>560</b>	<b>895</b>	<b>965</b>
Change in depreciation and amortization	2,398	2,527	2,876	3,167	3,446
Change in working capital	728	2,794	-651	-109	117
Net financial cost (income)	2,234	1,928	1,968	1,806	1,965
Income tax paid	-73	-72	-49	-92	-147
Net interest received	13	22	0	0	0
Others	-45	6	-30	-21	-23
<b>CF Operating</b>	<b>5,193</b>	<b>7,360</b>	<b>4,674</b>	<b>5,647</b>	<b>6,323</b>
Capex	-5,513	-5,218	-6,656	-7,262	-6,943
Increase in intangible assets	0	0	-16	-17	-18
Others	-222	154	0	0	0
<b>CF Investing</b>	<b>-5,735</b>	<b>-5,064</b>	<b>-6,672</b>	<b>-7,278</b>	<b>-6,961</b>
Net Capital raise	0	0	-57	0	0
Net debt financing	3,969	-970	3,451	3,255	3,233
Dividend payout	-77	-312	0	-73	-117
Interest paid	-2,355	-2,235	-1,984	-1,813	-1,969
Others	195	110	0	0	0
<b>CF Financing</b>	<b>1,732</b>	<b>-3,407</b>	<b>1,409</b>	<b>1,368</b>	<b>1,147</b>
<b>Net change in cash</b>	<b>1,190</b>	<b>-1,112</b>	<b>-589</b>	<b>-263</b>	<b>510</b>
Cash at the beginning	1,001	2,190	1,078	489	225
Adjustment (Time deposit & FX effect)	-1	-1	0	0	0
<b>Cash at the end</b>	<b>2,190</b>	<b>1,078</b>	<b>489</b>	<b>225</b>	<b>735</b>

Source(s): Company, ABCI Securities estimates

**Key Ratio (2014A-2018E)**

<b>FY ended Dec 31 (RMB mn)</b>	<b>2014A</b>	<b>2015A</b>	<b>2016E</b>	<b>2017E</b>	<b>2018E</b>
<b>Sales mixed (%)</b>					
Wind	96.13	91.74	97.96	98.86	98.97
Concession construction	0.15	4.42	0.00	0.00	0.00
Others	3.73	3.83	2.04	1.14	1.03
<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	43.28	39.86	41.43	43.54	43.19
Operating profit margin	40.95	37.30	38.43	40.54	40.19
Pre-tax margin	-1.19	2.78	9.25	12.80	12.70
Net profit margin	-2.46	1.13	7.58	10.49	10.42
Selling & administrative expenses/revenue	0.00	0.00	0.00	0.00	0.00
Effective tax rate	-106.87	59.42	18.00	18.00	18.00
<b>Growth (%)</b>					
Revenue	-7.89	7.76	8.35	15.51	8.66
Gross profit	-17.05	-0.77	12.62	21.40	7.78
Operating profit	-13.60	-1.85	11.62	21.86	7.72
Net profit	n.a.	n.a.	628.52	59.88	7.84
<b>Balance sheet ratios</b>					
Current ratio (x)	0.61	0.21	0.17	0.16	0.18
Quick ratio (x)	0.53	0.14	0.11	0.10	0.12
Cash ratio (x)	0.23	0.06	0.03	0.01	0.03
Trade and bill receivables days	230.79	87.32	95.00	95.00	95.00
Trade and bill payables turnover days	53.84	143.17	130.00	130.00	130.00
Inventory turnover days	4.37	5.24	5.00	5.00	5.00
Total debt / equity ratio (%)	377.74	374.33	389.83	402.00	411.82
Net debt / equity ratio (%)	354.48	364.27	385.47	400.08	405.79
<b>Returns (%)</b>					
ROAA	-0.3	0.0	0.6	0.9	0.9
ROAE	-1.5	0.1	3.3	5.1	5.3
Payout ratio	0.00	0.00	20.00	20.00	20.00

Source(s): Company, ABCI Securities estimates

## Disclosures

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### Definition of equity rating

Rating	Definition
Buy	Stock return $\geq$ Market return rate
Hold	Market return – 6% $\leq$ Stock return < Market return rate
Sell	Stock return < Market return – 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	$2.6 \leq$ 180 day volatility/180 day benchmark index volatility
High	$1.5 \leq$ 180 day volatility/180 day benchmark index volatility < 2.6
Medium	$1.0 \leq$ 180 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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