



**農銀國際**

ABC INTERNATIONAL

ABCI SECURITIES COMPANY LIMITED

# China Alternative Energy Sector

## Rapid growth to continue

June 29, 2018



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# China Alternative Energy Sector Rapid growth to continue

- China will continue to promote alternative energy in 2018-20E.
- China's nuclear power capacity/output would expand at 17%/14% CAGRs in 2017-20E. Investors are advised to focus on three major nuclear power operators accounting for more than 80% of nationwide nuclear power capacity
- China targets to expand wind power capacity/output by 11%/9% CAGRs in 2017-20E
- **OVERWEIGHT** sector outlook; we prefer **Longyuan Power (916 HK)** and **CGN Power (1816 HK)**

**China's nuclear power capacity and power output to expand at 17%/14% CAGRs in 2017-20E.** Back in 2014, the Chinese government targets a nuclear power capacity of 58GW in 2020, representing a 2017-20 CAGR of 17%. While no specific nuclear power output target has been issued, assuming a utilization of 6,300hr on average in 2017-20E, power output would reach 366bn kWh in 2020E, representing a 14% CAGR in 2017-20E. Nuclear power is preferred by the government for its low cost, lack of greenhouse gas emission, and high efficiency. Rapid development in the industry would present great opportunities to operators.

**Three major nuclear power operators will take up more than 80% of China's nuclear power capacity.** According to the industry data, 115.8GW of new nuclear power capacity has been planned and proposed, of which 47%/33%/16% are accounted by China National Nuclear Corporation (CNNC), China General Nuclear Power Group (CGNPC), and State Power Investment Corporation (SPIC). We believe the three major nuclear power operators would continue to dominate China's nuclear power industry in the foreseeable future.

**China's wind power capacity/output would expand at 9%/11% CAGRs in 2017-20E.** According to the "13<sup>th</sup> Five-Year Plan (FYP) for Renewable Energy" issued by National Development and Reform Commission (NDRC) in 2016, the government targets to attain no less than 210GW of wind power capacity by end-2020, implying a 9% CAGR during 2017-20E. In addition, power output is expected to reach 420bn kWh in 2020, suggesting an 11% CAGR in 2017-20. We believe such objectives are achievable.

**OVERWEIGHT sector outlook; prefer Longyuan (916 HK) and CGN (1816 HK).** We like **Longyuan Power** for its prime wind power asset and improving utilization hour. We also recommend **CGN Power** for its leading position in the nuclear industry and quality assets.

**Risks.** 1) Wind power tariff cut over the long run will reduce profit; 2) Decreased power demand may hinder wind power development; 3) Wind power curtailment may worsen and reduce utilization hour; 4) Safety issues related to nuclear power; 5) EPS dilution on possible cash call.

## Sector Valuation Summary (data as of June 28, 2018)

Company	Ticker	Rating	TP (HK\$)	FY18E P/E(x)	FY19E P/E (x)	FY18E P/B (x)	FY19E P/B (x)	FY18E Yield(%)	FY19E Yield(%)
CGN Power	1816	BUY	2.70	8.4	7.5	1.1	1.0	3.6	4.1
Longyuan Power	916	BUY	8.40	9.1	7.8	0.9	0.8	2.2	2.6
Huaneng Renewables	958	BUY	3.30	5.7	5.3	0.8	0.7	2.6	2.8
Datang Renewable	1798	HOLD	1.50	9.9	6.9	0.7	0.6	2.0	2.9

Source(s): Bloomberg, ABCI Securities estimates

## Sector Report June 29, 2018 OVERWEIGHT

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### Key Data

Avg.18E P/E (x)	8.3
Avg.18E P/B (x)	0.9
Avg.18E Dvd Yield (%)	2.6

Source(s): Bloomberg, ABCI Securities

### Sector Performance

	Absolute	Relative*
1-mth	(12.7%)	(3.6%)
3-mth	2.9%	12.3%
6-mth	10.8%	17.8%

\*Relative to HSCEI

Source(s): Bloomberg, ABCI Securities

### 1-Year sector performance (%)



Source(s): Bloomberg, ABCI Securities

## Key positives and outlook

China's energy structure will continue to shift from traditional coal-fired power to sustainable alternative energy sources on rising pollution concerns and depleting fossil reserves (e.g. oil and coal). Given coal-fired energy still contributes to ~70% of China's power output, the government will continue to promote the use of alternative energy. We believe nuclear power and wind power are ideal alternative energy choices because of two major advantages: 1) no pollutant is emitted in the process of power generation; 2) higher utilization hour (nuclear at ~7,000hr/yr, wind at ~2,000hr/yr, higher than solar at ~1,500hr/yr), which lowers the average cost of power generation.

### Nuclear power

#### China's nuclear power would be the key substitute energy source for coal-fired power

China's nuclear power output has been maintaining an uptrend for the past decade, generating 62bn kWh in 2007 and 248bn kWh in 2017, representing a 300% jump or a 10-year CAGR of 15%. The contribution of nuclear power in overall national power output also increased from 1.9% in 2007 to 3.9% in 2017. Given that most developed countries have been using nuclear power as an energy source (~30% of total energy output on average), we believe China's nuclear power would grow further to replace coal-fired power.

#### China's nuclear power capacity to reach 58GW by 2020

According to China's "Strategic Action Plan of Energy Development (2014-20)" (The Plan) announced in June 2014, the government targets a nuclear power capacity of 58GW in 2020, representing a 62% jump from 2017 or a 3-year CAGR of 17% from 36GW. In the recently announced "13th FYP for power" on Nov 7, 2016, the Chinese government reiterated the same nuclear power capacity target for end-2020.

#### China's nuclear power output would reach 14% CAGR growth in 2017-20

While no specific power output target has been set by the Chinese government, we estimate with a capacity of 58GW by end-2020 and a utilization of 6,300hr (historical low end figure in 2015), nuclear power output would reach 366bn kWh in 2020, suggesting a 14% CAGR in 2017-20E. To note, the estimated utilization of 6,300hr is leaning on the conservative side.

#### Nuclear power advantages

Nuclear power has low production cost, zero greenhouse gas emission and high efficiency. We believe the Chinese government would gradually substitute coal-fired power with nuclear because of the following advantages.

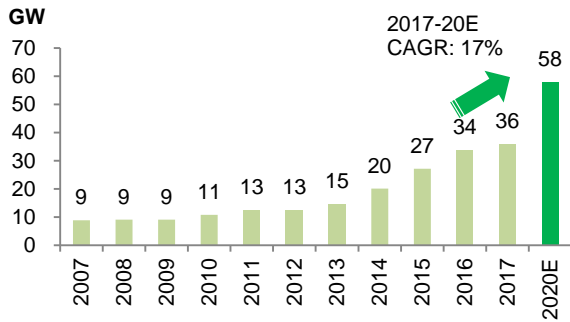
- ◆ **Lower production cost.** According to the industry data, unit production cost of nuclear power is RMB 0.28/kWh, similar to RMB 0.3/kWh for hydro but much lower than RMB 0.4/kWh for coal-fired, RMB 0.5/kWh for wind, and RMB 0.9/kWh for solar.
- ◆ **No greenhouse gas emitted.** Unlike the generation of coal-fired power, water is the only by-product of nuclear power generation.
- ◆ **High efficiency.** Utilization hour of nuclear power plant reach 7,000, higher than 5,000hr in coal-fired power plant and much higher than 2,000hr for wind farm and 1,500hr for solar farm.

#### Three major nuclear power operators will take up more than 80% of nuclear power capacity in China

According to the industry data, as of Mar 2018, China has 23.3GW of nuclear power capacity under construction; 44%/44% is accounted by China National Nuclear Corporation (CNNC) and China General Nuclear Power Group (CGNPC). The two take up 88% of nuclear power capacity under construction. In addition, 115.8GW of new nuclear power capacity has been planned and proposed, of which 47%/33%/16% was accounted by CNNC, CGNPC and State Power Investment Corporation (SPIC). We believe the three major nuclear power operators would continue to dominate the nuclear scene and advise investors to focus on the major nuclear power operators.

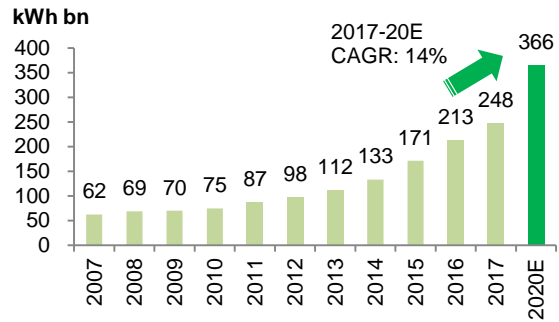


Exhibit 1: China's nuclear power capacity would grow rapidly in 2017-20E



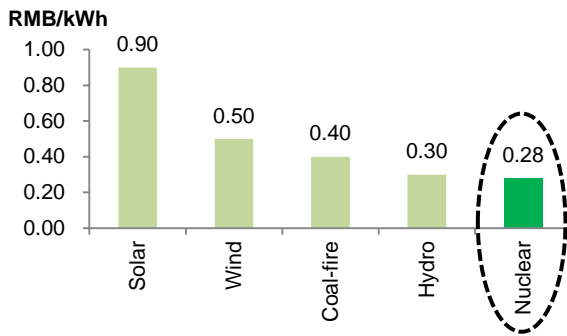
Source(s): NDRC, NEA, CEC, ABCI Securities estimates

Exhibit 2: China's nuclear power output is likely to experience mid-teens growth during 2017-20E



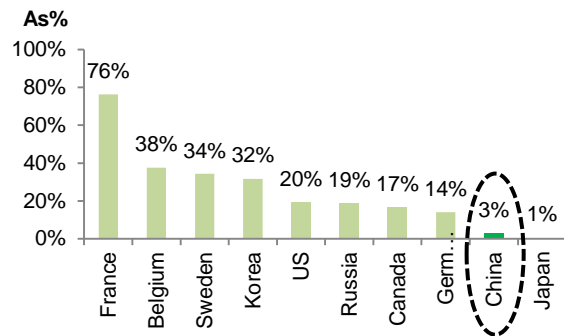
Source(s): NDRC, NEA, CEC, ABCI Securities estimates

Exhibit 3: Nuclear power is cheaper than other energy sources



Source(s): NEA, CEC, HDFX, ABCI Securities

Exhibit 4: Nuclear power's share in overall power output worldwide (2015)

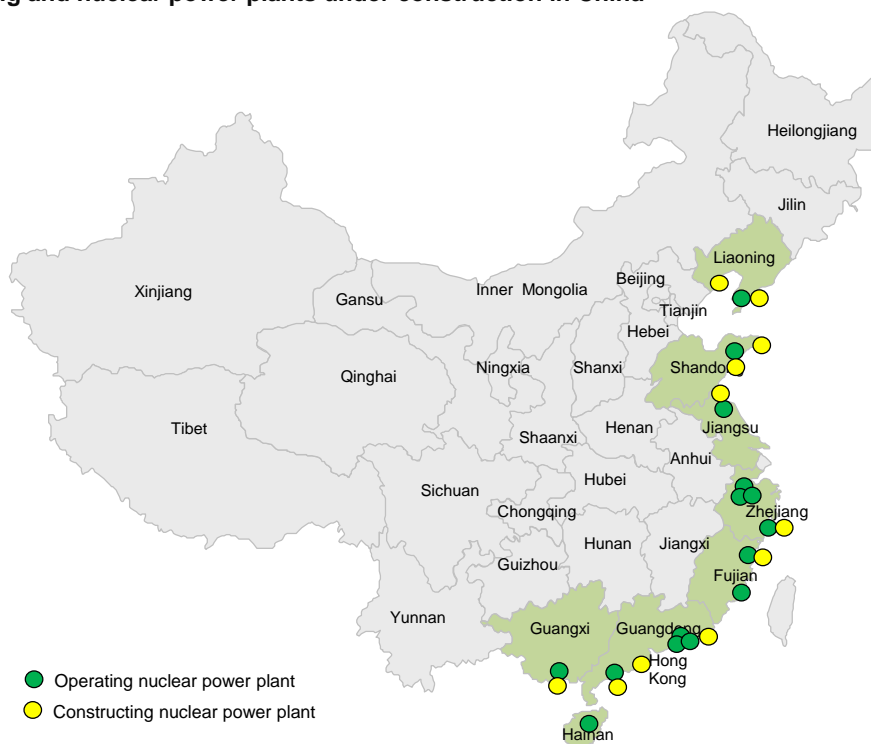


Source(s): NEA, CEC, NDRC, CNEC

**Exhibit 5: Planned and proposed nuclear power plants in China**

Power plant Name	City	Province	Region	Status	Possible Constructor/ Operators	Units	Capacity per unit (MW)	Total Capacity (MW)	Total est. investment (RMB bn)
								<b>115,800</b>	<b>1,207.3</b>
Lufeng	Lufeng	Guangdong	Coastal	Const.	CGNPC	6	1,250	7,500	78.0
Xudabao	Huludao	Liaoning	Coastal	Const.	CNNC	6	1,250	7,500	50.0
Haifeng	Shanwei	Guangdong	Coastal	Enviro. Study	CNNC	6	1,250	7,500	27.0
Donggang	Dandong	Liaoning	Coastal	Feasibility Study	Huadian	4	1,000	4,000	43.0
Zhaoqing	Zhaoqing	Guangdong	Inland	Feasibility Study	CGNPC	4	700	2,800	50.0
Zhangzhou	Zhangzhou	Fujian	Coastal	Feasibility Study	CNNC	6	1,250	7,500	NA
Sanming	Sanming	Fujian	Inland	Feasibility Study	CNNC	4	1,000	4,000	80.0
Taohuaijiang	Yiyang	Hunan	Inland	Postpone	CNNC	4	1,250	5,000	67.0
Daban	Xianning	Hubei	Inland	Postpone	CGNPC	4	1,250	5,000	100.0
Pengze	Pengze	Jiangxi	Inland	Postpone	SPIC	4	1,250	5,000	105.0
Sanba	Nanchong	Sichuan	Inland	Postpone	CGNPC	4	1,000	4,000	>50
Longyou	Longyou	Zhejiang	Inland	Postpone	CNNC	4	1,000	4,000	60.0
Peiling	Chongqing	Chongqing	Inland	Postpone	SPIC	4	1,250	5,000	NA
Jiamusi	Jiamusi	Heilongjiang	Inland	Postpone	CGNPC	4	1,000	4,000	NA
Wuhu	Wuhu	Anhui	Inland	Plan	CGNPC	4	1,000	4,000	50.0
Nanyang	Nanyang	Henan	Inland	Plan	CNNC	4	1,000	4,000	80.0
Xiaomoshan	Yueyang	Henan	Inland	Plan	SPIC	4	1,000	4,000	60.0
Jingyu	Jingyu	Jilin	Inland	Plan	SPIC	4	1,250	5,000	NA
Jiyang	Chizhou	Anhui	Inland	Plan	CNNC	4	1,000	4,000	>40
Shaoguan	Guangzhou	Guangdong	Inland	Plan	CGNPC	4	1,250	5,000	97.3
Cangnan	Cangnan	Zhejiang	Coastal	Plan	CGNPC	6	1,000	6,000	NA
Songzi	Songzi	Hubei	Inland	Plan	CNNC	6	1,000	6,000	80.0
Yanjiashan	Wan'an	Jiangxi	Inland	Plan	CNNC	4	1,250	5,000	90.0

Source(s): CGN, NEA, ABCI Securities

**Exhibit 6: Existing and nuclear power plants under construction in China**


Source(s): CEC, NEA, ABCI Securites

## Wind power

### China's wind power capacity would increase at 9% CAGR or more in 2017-20E

According to the "13th FYP for Renewable Energy" issued by National Development and Reform Commission (NDRC) in Dec 2016, the Chinese government targets to attain no less than 210GW of wind power capacity by end-2020, a 28% jump from 164GW by end-2017, or a 9% CAGR during 2017-20E. Wind power capacity expanded at 44% CAGR in 2007-17 from 4.2GW to 164GW. Nonetheless, wind power capacity only contributed to 9% of overall power capacity (include coal-fired, hydro etc.) in 2017, suggesting space for expansion. We believe the government's target of 210GW will be achieved or even exceeded in the next three years.

### Wind power output to increase at 11% CAGR in 2017-20E

According to NDRC's 13<sup>th</sup> FYP statement announced in Dec 2016, China wind power output would be 420 bn kWh in 2020, suggesting a 37% jump from 306bn kWh in 2017, or an 11% CAGR during 2017-20. We believe this target is achievable, assuming that wind capacity would expand to 210GW in 2020 with ~2,000 hr of utilization.

### National utilization hour would stay above 1,800 going forward

China's wind power utilization hour has been trending up for the last three years. According to China Electricity Council (CEC), the national average wind power utilization hour was 1,868 in 2017, 14% higher than 1,633hr in 2016, thanks to China's effort in reducing curtailment rate. We expect utilization hour to stay above 1,800hr in the long run.

### Wind power tariff would maintain a downtrend

We reassert our view that decline in wind power tariff will be a long term trend since the government is eager to shed the financial burden. China is now subsidizing ~RMB 0.1/kWh of wind power generated. In addition, National Energy Administration (NEA) announced on May 24, 2018 that effective on Jan 1, 2019, all wind farms would have to compete for power prices. This new policy is subjected to all new capacity installed in 2019, including both onshore and offshore wind farms. According to industry data, current market price is RMB0.45/kWh, representing a 17%-20% discount to the benchmark price (set by the government at ~RMB 0.54/kWh incl. VAT). The new competition price would be at ~2% discount to the current market price. We believe the new policy is in line with our expectation that the Chinese government would gradually lower tariff to encourage wind power operators to compete with coal-fired energy ones on a cost basis.

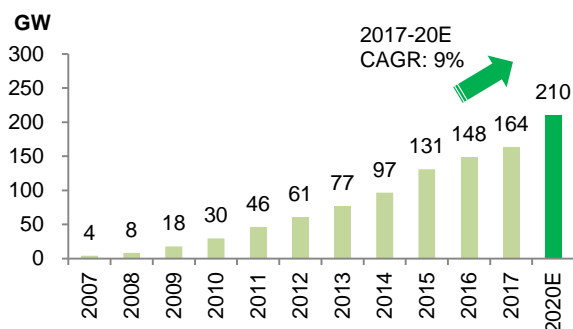
### Wind power operators are deleveraging

According to industry data, average interest rate of SOE wind power operators is around 4.5%-5.0%. We believe this is a result of tightened liquidity in China. Increased difficulties in obtaining funds, compounded with declining wind power tariff, has driven wind power operators to deleverage. We believe operators with prime asset quality and management skills that are able to maintain a stable cash inflow would have a significant edge.

### Stock recommendation - China Longyuan Power (916 HK)

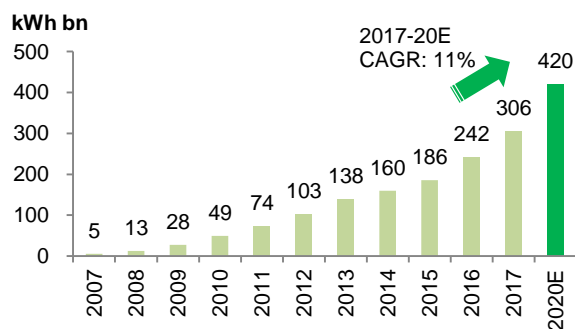
We believe wind power industry would continue to experience robust capacity growth on the back of its low base (2017 wind power capacity/output accounted for only 9%/4% of nationwide energy capacity/output). Against the backdrop of deleveraging and decreasing wind power tariff, we believe high-leveraged wind power operators that have been expanding aggressively may suffer due to poor cash inflow. We advise investors to focus on operators with good asset quality that provides strong cash inflow and high utilization rate such as **China Longyuan Power (916 HK)**. We believe wind power operators would eventually be conceptualized as utility plays instead of growth stocks in the long run.

**Exhibit 7: China's wind power capacity outlook**



Source(s): NDRC, NEA, CEC, ABCI Securities estimates

**Exhibit 8: China's wind power output outlook**



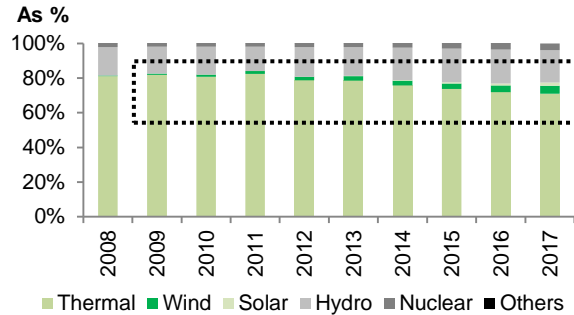
Source(s): NDRC, NEA, CEC, ABCI Securities estimates

**Exhibit 9: China's wind power utilization maintained an uptrend in the past three years**



Source(s): CEC, ABCI Securities

**Exhibit 10: China's wind power output only accounted for a very small proportion of total power output**



Source(s): CEC, ABCI Securities

**Exhibit 11: China wind power resource map**



Source(s): NEA, ABCI Securities

## Overhangs in the alternative energy sector

Decelerating power demand growth, safety issue, and declining wind power tariff are potential challenges in the sector.

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

Wind power tariff in China will maintain a downtrend going forward because: 1) A lower wind power tariff would encourage the switch from coal-fired to wind power; 2) China is likely to reduce subsidies for wind power. We advise investors to focus on the operators with quality assets providing high utilization and strong cash flow.



### Decelerating power demand growth may hinder wind power development

Slowdown in industrial activities would slash power demand and hinder development in alternative energy. According to NEA, China's power consumption grew only 0.5% YoY in 2015, the lowest in recent years. This was mainly due to the waning industrial production since ~70% of China's power consumption came from the industrial sector. According to the Bloomberg data, China's industrial production growth decreased from 19.2% in Nov 2009 to 6.2% in Dec 2017, and rebounded slightly to 7.0% in Apr 2018.

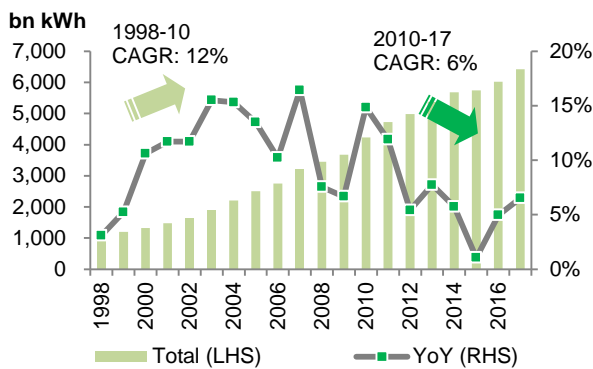
### Deleveraging in China may restrain development of wind power

Tightened liquidity in China has driven up interest cost for corporates, which in turn may trigger widespread deleveraging. Wind power operators may dial down capacity growth due to difficulties in obtaining funds.

### Safety issue of nuclear power

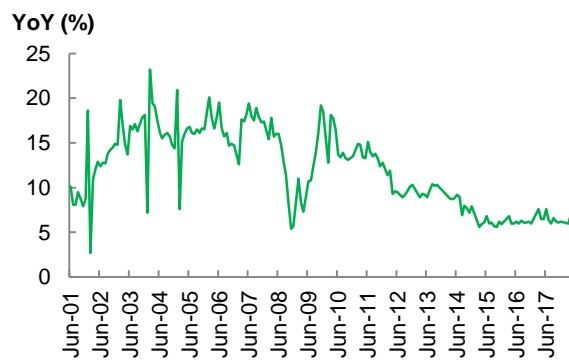
The Fukushima Dai-ichi nuclear accident in 2011 has increased public awareness on the safety of nuclear power. We believe the occurrence of any nuclear power accidents, domestic or foreign, will negatively impact the development of nuclear industry in China. Any delay in nuclear plants completion would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

**Exhibit 12: China's power output would expand at a single-digit rate going forward**



Source(s): NEA, CEC, ABCI Securities

**Exhibit 13: China's industrial production activities growth remains low**



Source(s): Bloomberg, ABCI Securities



Company Report

June 29, 2018

Rating: BUY

TP: HK\$ 2.70

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Share price (HK\$)	2.00
Est. share price return	35.0%
Est. dividend yield	3.6%
Est. total return	38.6%

Source(s): Bloomberg, ABCI Securities

Key Data

52Wk H/L(HK\$)	2.3/2.0
Issued shares (mn)	45,449
Issued H-shares (mn)	11,164
Market cap (HK\$ mn)	94,533
H-share market cap (HK\$ mn)	23,220
3-mth avg daily turnover(HK\$ mn)	111
Major shareholder(s) (%)	
CGNPC	64.2%

Source(s): Company, ABCI Securities

Sector Performance

	Absolute	Relative*
1-mth	(7.3)	1.8
3-mth	2.3	11.7
6-mth	(1.6)	5.4

\*Relative to HSCEI

Source(s): Bloomberg, ABCI Securities

1-Year share price performance(HK\$)



Source(s): Bloomberg, ABCI Securities

CGN Power (1816 HK)

Key beneficiary in the rise of nuclear power

- CGN Power's (CGN) 1Q18 results and operation data were better than our estimates
- Attributed nuclear power capacity to grow by 10%/8%YoY in 2018E/19E.
- More new nuclear power plant projects will be launched in coming years, which is positive to CGN
- Rising interest cost would increase financial burden
- Maintain BUY with TP of HK\$ 2.70, which implies 11x/10x 2018E/19E P/E and 1.4x/1.3x 2018E/19E P/B

**1Q18 earnings beat estimates.** Under IFRS GAAP, CGN's adj. net profit was RMB 2.5bn (+31%YoY), equivalent to 27%/30% of our full-year estimates/Bloomberg consensus and ahead of the historical run rate of 23%. The better-than-expected results could be attributed to output growth in 1Q18 at 33,992GWh (+16% YoY), equivalent to 22% of our previous full-year estimate and ahead of the historical average of 20%.

**Attributable capacity to grow by 10%/8% YoY in 2018E/19E.** According to CGN's schedule, Yangjiang Unit 5 and Taishan Unit 1 will commence operation in 2018; Yangjiang Unit 6 and Taishan Unit 2 will commence operation in 2019. These projects would contribute 1,224MW/1,100MW of new capacity, driving up total attributable capacity by 10%/8%YoY.

**More new nuclear power plant projects to be launched in coming years; CGN would be one of the key beneficiaries.** According to industry data, around 115.8GW of nuclear power capacity is under planning. This would help boost CGN's future capacity since CGN's parent company is one of the three major operators in China.

**Rising interest rate would increase financial burden.** CGN's effective interest cost rate increased from 2.8% in 2016 to 4.4% in 1Q18, reflecting tightened borrowing in China. Given CGN's high net gearing, we believe further increase in interest rate would pressure future earnings.

**Maintain BUY with TP of HK\$ 2.70.** CGN's 1Q18 results are better than expected though rising interest rate may pressure earnings in the future. We revise down CGN's adj. net profit estimates. The latest DCF-derived TP at HK\$ 2.70 (previously at HK\$ 3.00) implies 11x/10x 2018E/19E P/E and 1.4x/1.3x 2018E/19E P/B. We believe CGN, as a market leader, would benefit the most from upcoming China's nuclear power development. Maintain BUY.

**Risks:** 1) Falling utilization hours; 2) Operation safety risk; 3) Construction risk; 4) Fuel cost risk; 5) Tariff risk; 6) Currency and interest rate risks; 7) Fundraising activities

Results and Valuation

FY ended Dec 31	2016A	2017A	2018E	2019E	2020E
Revenue (RMB mn)	32,890	45,616	52,610	57,688	61,704
Chg (% YoY)	22.7	38.7	15.3	9.7	7.0
Adj. net profit (RMB mn)	7,817	8,094	8,958	10,137	11,585
Chg (% YoY)	17.1	3.5	10.7	13.2	14.3
Adj. EPS (RMB)	0.172	0.178	0.197	0.223	0.255
Chg (% YoY)	16.6	3.7	10.7	13.2	14.3
BVPS (RMB)	1.241	1.448	1.546	1.692	1.871
Chg (% YoY)	-7.5	16.7	6.7	9.4	10.6
P/E (x)	9.68	9.33	8.43	7.45	6.52
P/B (x)	1.34	1.15	1.08	0.98	0.89
ROE (%)	12.41	15.53	13.24	13.86	14.38
ROA (%)	2.61	2.94	2.48	2.71	3.00
DPS (RMB)	0.051	0.068	0.059	0.067	0.077
Yield (%)	3.06	4.09	3.58	4.05	4.62
Net gearing (%)	181.2	191.3	178.3	167.5	142.0

Source(s): Bloomberg, ABCI Securities estimates



## 1Q18 results and operation data highlights

### 1Q18 earnings beat our estimates

Under IFRS GAAP, CGN's net profit was RMB 2.5bn, down 25% YoY. Netting out the one-off fair value gain in 1Q17, 1Q18 net profit rose 31% YoY, equivalent to 27%/30% of our full-year estimates/Bloomberg consensus and ahead of historical run rate of 23%. Top line increased by 9%YoY, mainly driven by solid nuclear power output growth (reached 33,992GWh, +16%YoY).

### 1Q18 power output was higher than our estimates.

CGN's 1Q18 nuclear power output was 33,992GWh (+16%YoY), equivalent to 22% of our previous full-year estimate and ahead of the historical average of 20%. Output growth was mainly driven by Yangjiang and Fangchenggang power plants, whose output expanded by 20%/83%YoY and contributed to 19%/12% of total power output in 1Q18.

### Increase in power output - thanks to the commencement of new plants and decrease in outage time

Yangjiang power plants recorded a 20% YoY increase in power output in 1Q18, thanks to the commencement of Yangjiang Unit 4 in Mar 2017. The 83%YoY output jump in Fangchenggang power plants was mainly attributable to the significant reduction in outage time compared to 1Q17.

### Utilization hour improved on power demand recovery

According to information disclosed in 1Q18 analyst briefing, overall utilization hour of CGN went up 5.5% YoY in 1Q18, representing a 158hr increment. This was mainly attributable to China's improved power demand (+6.9% YoY in 1Q17 vs. 9.8% YoY in 1Q18). We believe the recovery in tertiary industry and residential usages have pushed up overall demand (+7.8% and +2.8% YoY in 1Q17 vs. +16.7% and +17.2% YoY in 1Q18).

## 2018 outlook

### Attributable capacity to grow by 10%/8% YoY in 2018E/19E

According to CGN's schedule, Yangjiang Unit 5 and Taishan Unit 1 would commence operation in 2018, contributing 1,224MW of new attributable capacity (+10%YoY). In 2019, Yangjiang Unit 6 and Taishan Unit 2 would commence operation, adding around 1,100MW of new capacity to CGN, the Group's attributable capacity would increase by 8%YoY. We believe solid capacity growth would serve as key earnings driver for CGN.

### Attributable utilization hour would exceed 7,000hr

We believe increasing portion of nuclear energy in China's overall energy structure would support utilization hour. According to China Electricity Council (CEC) data, utilization hour in power plant in China close to 7,000hr. Moreover, the Group has higher stakes in the power plants in Guangdong Province (GD) whose utilization hour is usually higher (2017 average: 7,815hr vs. 6,078hr for all provinces ex. GD). Being the market leader in nuclear power industry, we believe CGN's attributable utilization hour would exceed 7,000hr in the long run.

### Adjusted net profit growth at 11%/13%YoY for 2018E/19E thanks to capacity growth and decelerate in interest cost growth

We expect CGN's adjusted net profit (excluded one-off gain or loss) to increase by 11%/13% YoY due to the attributable capacity growth of 10%/8%YoY in 2018E/19E and the slower finance cost growth rate. Given there are only 1,224MW and 1,100MW of new attributable capacity to be constructed in 2018E and 2019E, we believe financial burden will be manageable. The Group is unlikely to increase borrowings. We expect interest coverage ratio would continue improve after 2017.

### Key assets in Guangdong (GD) suggests higher utilization hour

We believe CGN's operation in GD would support profitability. Nuclear power plants in GD usually have higher average utilization hour than other regions in China. As of end-2017, 65% of CGN's attributable nuclear power capacity came from GD. Facilities in GD service wealthier cities such as Hong Kong, Guangzhou, Shenzhen, etc. Utilization hour of CGN's power plants in GD was higher than the national average in 2017 (~7,815hr vs. 7,108hr nationwide), partially attributable of the province's successful transition from secondary to tertiary industry.



**More new nuclear power plant projects will be launched in coming years; CGN would be one of the key beneficiaries**

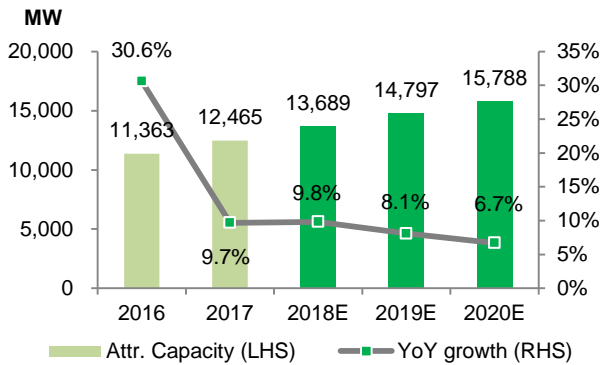
With the existing power plant projects close to completion. China is likely to unveil more projects in coming years. In light of Japan's nuclear power hazard in 2011, China has dialed down its nuclear development pace in the past few years, but we believe the momentum would resume in coming years. According to industry data, around 115.8GW of nuclear power capacity is undergoing feasibility study; Lufeng and Xudabao power plants are now under construction (total capacity: ~15GW). The proposed plants, once commence operation, would help boost CGN's capacity growth given that its parent, CGNPC, would account for 47% of total capacity.

**Concern 1: High net gearing ratio prompt concern on financial burden despite improvement to emerge after 2017**

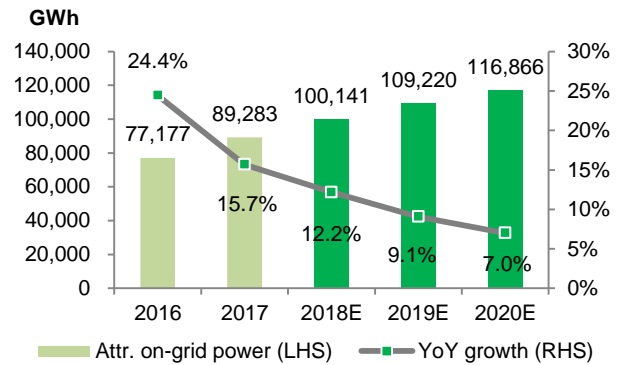
CGN plans to commence commercial operation of Yangjiang Unit 5 and Taishan Unit 1 in 2018; Yangjiang Unit 6 and Taishan Unit 2 in 2019; Hongyanhe Unit 5 and Unit 6 are likely to commence operation in 2020 and 2021. After the substantial capex in 2018 and 2019, CGN's major projects will be almost completed and capital needs would decline in the next few years. We therefore expect net gearing to be 178%/167%/142% for 2018E/19E/20E.

**Concern 2: Rising finance cost would increase financial burden**

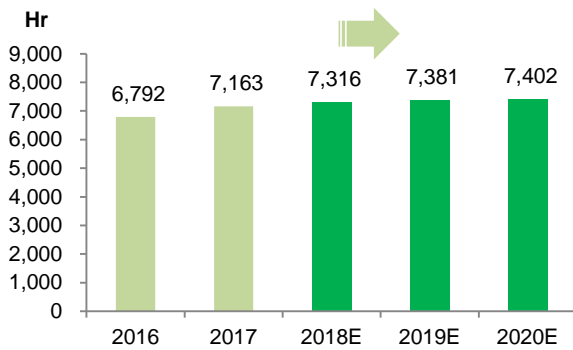
CGN's effective finance cost rate increased from 2.8% in 2016 to 4.0% in 2017, in addition, management said the rate stayed high at 4.4% in 1Q18. Given CGN's net gearing would exceed 100% in coming years, further increase in interest rate in China would affect earnings. CGN is applying for raising capitals in the A-share market, however, the timetable is uncertain at this stage, we believe this should help the Group to lower gearing but will cause earnings dilution effect.

**Exhibit 14: CGN's attributable capacity outlook**


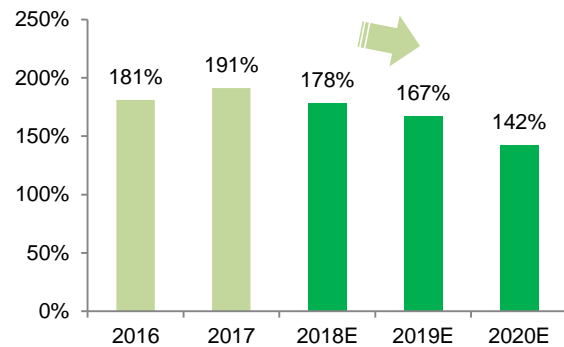
Source(s): Company, ABCI Securities estimates

**Exhibit 15: CGN's nuclear attributable power output outlook**


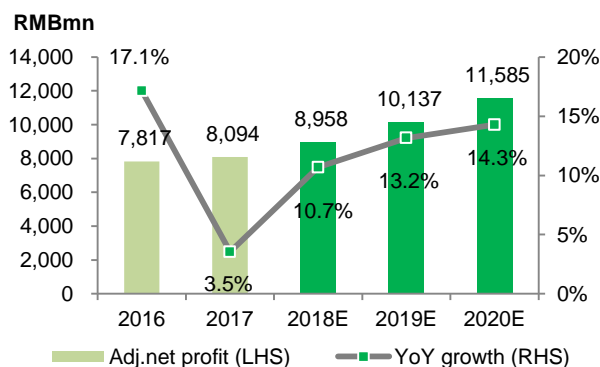
Source(s): Company, ABCI Securities estimates

**Exhibit 16: CGN's overall attributable utilization hour outlook**


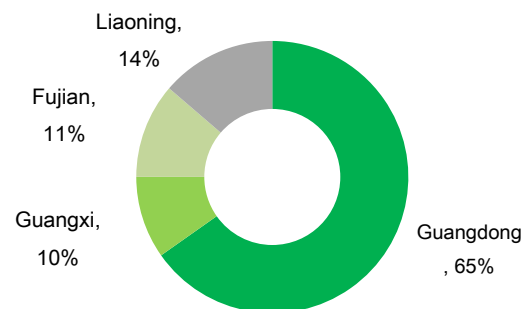
Source(s): Company, ABCI Securities estimates

**Exhibit 17: CGN's net gearing ratio outlook**


Source(s): Company, ABCI Securities estimates

**Exhibit 18: CGN's adjusted net profit outlook**


Source(s): Company, ABCI Securities estimates

**Exhibit 19: CGN's attributable capacity breakdown by province (2017)**


Source(s): Company, ABCI Securities

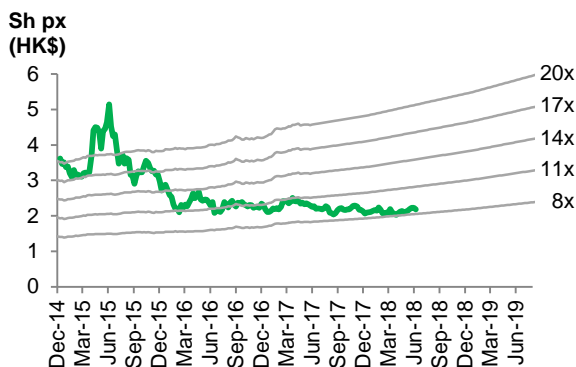


### Valuation

#### TP at HK\$ 2.70; maintain BUY

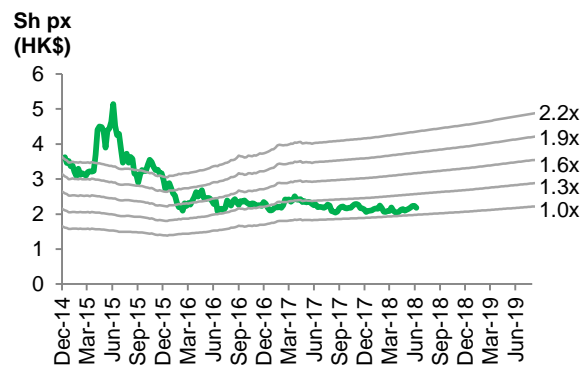
CGN's 1Q18 result is better than expected; we therefore revise up utilization hour by 2%/2% for 2018E/19E to reflect stronger power output. However, we believe China's rising interest rate would add to CGN's financial pressure. We revise up finance cost rate from 3% to 4.4%, which slashes CGN's 2018E/19E net profit by 5%/3%. Our new DCF-derived TP at HK\$ 2.70 (previously at HK\$ 3.00) implies 11x/10x 2018E/19E P/E and 1.4x/1.3x 2018E/19E P/B. As China's key nuclear power operator (currently controlled 60% of China's operating nuclear power capacity), CGN is a major beneficiary of the swift development in nuclear power. We believe the government would unveil more nuclear power projects shortly, which could serve as a catalyst to share price. Maintain **BUY**.

Exhibit 20: CGN's fwd P/E chart: the stock is trading at historical low end



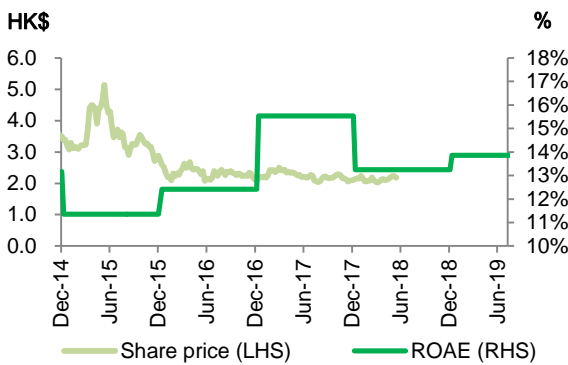
Source(s): Bloomberg, ABCI Securities estimates

Exhibit 21: CGN's fwd P/B chart



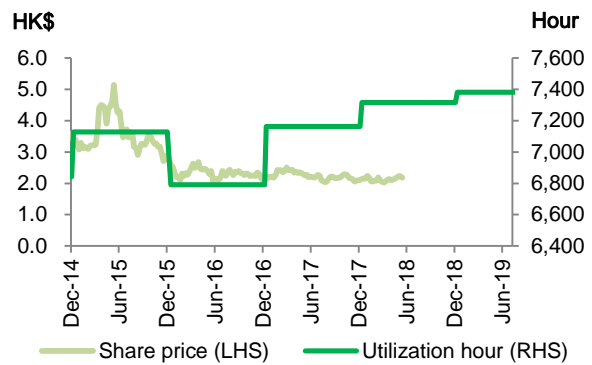
Source(s): Bloomberg, ABCI Securities estimates

Exhibit 22: CGN's share price versus ROAE



Source(s): Bloomberg, ABCI Securities estimates

Exhibit 23: CGN's share price versus utilization hour



Source(s): Bloomberg, ABCI Securities estimates



**Consolidated income statement**

<b>FY Ended Dec 31 (RMB mn)</b>	<b>2016A</b>	<b>2017A</b>	<b>2018E</b>	<b>2019E</b>	<b>2020E</b>
<b>Revenue</b>	<b>32,890</b>	<b>45,616</b>	<b>52,610</b>	<b>57,688</b>	<b>61,704</b>
Electricity	28,115	41,543	48,510	53,561	57,549
Service revenue	2,820	2,680	2,707	2,734	2,762
Other	926	670	670	670	670
<b>Cost of sales</b>	<b>(18,533)</b>	<b>(26,034)</b>	<b>(29,977)</b>	<b>(33,106)</b>	<b>(34,850)</b>
<b>Gross Profit</b>	<b>14,357</b>	<b>19,583</b>	<b>22,633</b>	<b>24,582</b>	<b>26,853</b>
SG&A expenses	(2,358)	(2,423)	(2,736)	(3,000)	(3,209)
Net financial income (cost)	(3,857)	(6,080)	(8,928)	(8,976)	(9,132)
Other income/ (expenses)	1,436	2,762	2,381	2,497	2,742
<b>Profit before tax</b>	<b>9,577</b>	<b>13,841</b>	<b>13,350</b>	<b>15,103</b>	<b>17,254</b>
Tax	(653)	(1,327)	(1,335)	(1,510)	(1,725)
<b>Net profit</b>	<b>8,925</b>	<b>12,515</b>	<b>12,015</b>	<b>13,593</b>	<b>15,529</b>
Profit attributable to:					
Minority interest	1,638	3,014	3,004	3,398	3,882
<b>Equity shareholders of the Company</b>	<b>7,287</b>	<b>9,500</b>	<b>9,011</b>	<b>10,195</b>	<b>11,647</b>
<b>Adj. equity shareholders of the Company</b>	<b>7,817</b>	<b>8,094</b>	<b>8,958</b>	<b>10,137</b>	<b>11,585</b>
<b>Basic EPS (RMB)</b>	<b>0.160</b>	<b>0.209</b>	<b>0.198</b>	<b>0.224</b>	<b>0.256</b>
<b>Adj. basic EPS (RMB)</b>	<b>0.172</b>	<b>0.178</b>	<b>0.197</b>	<b>0.223</b>	<b>0.255</b>
<b>DPS (RMB)</b>	<b>0.051</b>	<b>0.068</b>	<b>0.059</b>	<b>0.067</b>	<b>0.077</b>

Source(s): Company, ABCI Securities estimates

**Consolidated balance sheet**

<b>As of Dec 31 (RMB mn)</b>	<b>2016A</b>	<b>2017A</b>	<b>2018E</b>	<b>2019E</b>	<b>2020E</b>
<b>Current assets</b>	<b>43,825</b>	<b>56,369</b>	<b>55,426</b>	<b>62,816</b>	<b>66,502</b>
Cash	8,457	10,316	12,589	10,032	20,832
Pledged and restricted bank deposits	2,053	2,032	2,032	2,032	2,032
Trade and bill receivables	5,735	6,648	6,324	7,901	5,624
Other receivables and prepayments	12,662	15,913	16,463	17,722	17,893
Inventories	13,138	19,739	16,398	23,510	18,501
Other current assets	1,779	1,720	1,620	1,620	1,620
<b>Non-current assets</b>	<b>243,809</b>	<b>303,158</b>	<b>313,044</b>	<b>321,626</b>	<b>326,658</b>
Property, plant & equipment	216,509	277,284	289,917	297,996	302,029
Investment properties	320	240	240	240	240
Intangible assets	3,066	4,114	4,338	4,968	5,585
Investment in JV and associates	12,037	8,364	9,377	10,374	11,512
Deferred tax assets	1,687	1,551	1,551	1,551	1,551
Other non-current assets	10,190	11,605	7,621	6,498	5,742
<b>Total Assets</b>	<b>287,634</b>	<b>359,527</b>	<b>368,470</b>	<b>384,443</b>	<b>393,160</b>
<b>Current Liabilities</b>	<b>65,168</b>	<b>60,654</b>	<b>62,110</b>	<b>65,924</b>	<b>64,993</b>
Trade and bill payables	19,295	24,211	25,888	29,439	28,804
Other payables	1,486	1,170	671	671	671
Short term borrowings	26,407	22,904	23,182	23,444	23,149
Other current assets	17,980	12,369	12,369	12,369	12,369
<b>Non-current liabilities</b>	<b>140,567</b>	<b>196,339</b>	<b>196,402</b>	<b>198,526</b>	<b>196,139</b>
Deferred tax liabilities	1,615	1,566	1,566	1,566	1,566
Long-term borrowings	132,476	185,627	187,465	189,589	187,203
Other non-current assets	6,477	9,146	7,371	7,371	7,371
<b>Total Liabilities</b>	<b>205,735</b>	<b>256,994</b>	<b>258,512</b>	<b>264,450</b>	<b>261,133</b>
Minority interests	25,364	36,695	39,699	43,097	46,980
<b>Shareholders' equities</b>	<b>56,535</b>	<b>65,838</b>	<b>70,259</b>	<b>76,895</b>	<b>85,048</b>

Source(s): Company, ABCI Securities estimates



**Consolidated cash flow statement**

FY ended Dec 31 (RMB mn)	2016A	2017A	2018E	2019E	2020E
Profit before tax	9,577	13,841	13,350	15,103	17,254
Change in depreciation and amortization	4,727	7,186	8,513	8,957	9,319
Change in Working Capital	778	3,658	2,619	(6,396)	6,479
Net financial cost (income)	3,857	6,080	8,928	8,976	9,132
Income tax paid	(1,358)	(1,324)	(1,327)	(1,335)	(1,510)
Net interest received	0	0	0	0	0
Others	(829)	(2,644)	(1,013)	(997)	(1,138)
<b>Operating cash flow</b>	<b>16,753</b>	<b>26,797</b>	<b>31,069</b>	<b>24,308</b>	<b>39,536</b>
Capex	(17,297)	(18,319)	(20,803)	(16,631)	(12,882)
Increase in intangible assets	(536)	(704)	(986)	(1,035)	(1,087)
Others	(1,410)	(5,504)	247	292	241
<b>Investing cash flow</b>	<b>(19,243)</b>	<b>(24,527)</b>	<b>(21,542)</b>	<b>(17,373)</b>	<b>(13,727)</b>
Net Capital raise	0	0	7	0	0
Net debt financing	10,985	8,317	2,116	2,387	(2,682)
Dividend payout	(4,684)	(4,669)	(3,091)	(2,703)	(3,058)
Interest paid	(8,031)	(10,001)	(6,287)	(9,175)	(9,268)
Others	1,142	6,103	0	0	0
<b>Financing cash flow</b>	<b>(588)</b>	<b>(250)</b>	<b>(7,254)</b>	<b>(9,492)</b>	<b>(15,009)</b>
<b>Net change in cash</b>	<b>(3,078)</b>	<b>2,020</b>	<b>2,273</b>	<b>(2,557)</b>	<b>10,800</b>
Cash at the beginning	11,381	8,457	10,316	12,589	10,032
Adjustment (Time deposit & FX effect)	154	(160)	0	0	0
<b>Cash at the end</b>	<b>8,457</b>	<b>10,316</b>	<b>12,589</b>	<b>10,032</b>	<b>20,832</b>

Source(s): Company, ABCI Securities estimates

**Key ratio**

FY ended Dec 31	2016A	2017A	2018E	2019E	2020E
<b>Sales mixed (%)</b>					
Electricity	85.48	91.07	92.21	92.85	93.27
Service revenue	8.57	5.88	5.15	4.74	4.48
Other	2.81	1.47	1.27	1.16	1.09
<b>Total</b>	<b>97</b>	<b>98</b>	<b>99</b>	<b>99</b>	<b>99</b>
<b>Profit &amp; loss ratios (%)</b>					
Gross margin	43.65	42.93	43.02	42.61	43.52
Operating profit margin	38.53	39.27	40.32	39.91	40.82
Pre-tax margin	29.12	30.34	25.37	26.18	27.96
Net profit margin	27.13	27.43	22.84	23.56	25.17
Selling & administrative expenses/revenue	7.17	5.31	5.20	5.20	5.20
Effective tax rate	6.82	9.59	10.00	10.00	10.00
<b>Growth (%)</b>					
Revenue	22.74	38.69	15.33	9.65	6.96
Gross profit	19.44	36.40	15.58	8.61	9.24
Operating profit	17.39	41.33	18.42	8.54	9.39
Net profit	4.52	40.22	-4.00	13.14	14.24
<b>Balance sheet ratios</b>					
Current ratio (x)	0.67	0.93	0.89	0.95	1.02
Quick ratio (x)	0.25	0.31	0.34	0.30	0.44
Cash ratio (x)	0.16	0.20	0.24	0.18	0.35
Trade and bill receivables days	67.14	49.55	45.00	45.00	40.00
Trade and bill payables turnover days	364.88	304.98	305.00	305.00	305.00
Inventory turnover days	256.80	230.47	220.00	220.00	220.00
Total debt / equity ratio (%)	281.04	316.74	299.82	277.04	247.33
Net debt / equity ratio (%)	181.17	191.34	178.27	167.48	142.01
<b>Returns (%)</b>					
ROAA	2.6	2.9	2.5	2.7	3.0
ROAE	12.4	15.5	13.2	13.9	14.4
Payout ratio	31.81	32.53	30.00	30.00	30.00

Source(s): Company, ABCI Securities estimates





## China Longyuan Power (916 HK) Cash cow with improving utilization hour

- Longyuan Power (Longyuan) announced its 1Q18 results in Apr and 5M18 operation data in June. 1Q18 net profit grew 67%YoY, beating our estimates; 5M18 power output grew 22%YoY
- Long-term utilization hour would stay above 2,200, moderating the impact of modest capacity growth
- Evolving from a rapid-growth stock to a cash cow utility play, Longyuan may undergo rerating.
- Maintain **BUY** with TP of HK\$8.40 (previously at HK\$ 7.50) implies 12x/10x 2018E/19E P/E and 1.1x/1.0x 2018E/19E P/B.

**1Q18 earnings beat estimates.** Longyuan's 1Q18 net profit was RMB 1,901mn (+67%YoY), equivalent to 39%/43% of Bloomberg/ our full-year estimates and ahead of the historical average run rate of 32%. We estimate the better-than-expected 1Q results can be attributed to increasing utilization hour that lowered the unit operation cost; also, Longyuan has been deleveraging, which helped reduce finance cost.

**Long-term utilization hour would stay above 2,200, offsetting the impact of modest capacity growth.** 1Q18 utilization hour grew 26% YoY. We believe utilization hour would exceed 2,200 in 2018E on the back of policy support. Improving utilization hour would help ameliorate the impact of decelerating capacity growth in 2018E/19E.

**From growth stock to cash cow; Longyuan may undergo rerating.** Longyuan has maintained a positive free cash flow since 2015 while net gearing and wind power capacity growth were declining. Given the tightened liquidity in China, we believe a cash-rich company would appeal to investors. With the ongoing deleveraging, we believe Longyuan is evolving from a growth stock to a cash-rich utility stock. Rerating of the stock may occur as a result.

**Maintain BUY with TP of HK\$ 8.40.** Longyuan's 1Q18 results beat our estimate due to better-than-expected utilization hour. We therefore revise up utilization forecast and adjust various assumptions. We expect improved utilization hour would help the Group report 24%/16%YoY net profit growth in 2018E/19E. Our new TP at HK\$8.40 (previously at HK\$ 7.50) implies 12x/10x 2018E/19E P/E and 1.1x/1.0x 2018E/19E P/B. Against the backdrop of tightened liquidity in China, a cash-rich company such as Longyuan would be favored by the market. Maintain **BUY**.

**Risks.** 1) Power curtailment; 2) Wind resources risk; 3) Tariff risk; 4) Construction risk; 5) Fundraising risk; 6) Government policy to deleverage may constrain future growth

### Results and Valuation

FY ended Dec 31	2016A	2017A	2018E	2019E	2020E
Revenue (RMB mn)	22,304	24,592	27,532	29,857	32,129
Chg (% YoY)	13.3	10.3	12.0	8.4	7.6
Net profit (RMB mn)	3,415	3,688	4,575	5,306	6,005
Chg (% YoY)	18.7	8.0	24.1	16.0	13.2
EPS (RMB)	0.425	0.459	0.569	0.660	0.747
Chg (% YoY)	18.7	8.0	24.1	16.0	13.2
BVPS (RMB)	4.716	5.119	6.036	6.564	7.162
Chg (% YoY)	7.8	8.5	17.9	8.8	9.1
P/E (x)	12.17	11.27	9.09	7.84	6.92
P/B (x)	1.10	1.01	0.86	0.79	0.72
ROE (%)	9.35	9.33	10.21	10.48	10.89
ROA (%)	2.51	2.59	3.06	3.41	3.75
DPS (RMB)	0.085	0.092	0.114	0.132	0.149
Yield (%)	1.64	1.77	2.20	2.55	2.89
Net gearing (%)	154.6	135.6	117.1	103.4	92.0

Source(s): Bloomberg, ABCI Securities estimates

## Company Report

June 29, 2018

Rating: **BUY**

TP: **HK\$ 8.40**

Analyst : Kelvin Ng

Tel: (852) 2147 8869

Email: kelvinng@abci.com.hk

Share price (HK\$)	6.21
Est. share price return	35.3%
Est. dividend yield	2.2%
Est. total return	37.5%

Source(s): Bloomberg, ABCI Securities

### Key Data

52Wk H/L(HK\$)	7.8/5.0
Issued shares (mn)	8,036
Issued H-shares (mn)	3,340
Market cap (HK\$ mn)	54,808
H-Share Market cap (HK\$ mn)	22,779
3-mth avg daily turnover(HK\$ mn)	96
Major shareholder(s) (%)	
Guodian Corp.	57.3%

Source(s): Company, ABCI Securities

### Sector Performance

	Absolute	Relative*
1-mth	(9.0)	0.2
3-mth	4.8	14.2
6-mth	12.9	19.9

\*Relative to HSCEI

Source(s): Bloomberg, ABCI Securities

### 1-Year share price performance(HK\$)



Source(s): Bloomberg, ABCI Securities



## 1Q18 results highlight

### 1Q18 earnings beat our estimates.

1Q18 revenue was RMB6.9bn (+13%YoY), equivalent to 25%/25% of Bloomberg/ our full-year estimates, similar to the historical run rate of 24%. Net profit was RMB 1,901mn (+67%YoY), equivalent to 39%/43% of Bloomberg/ our full-year estimates and ahead of the historical average run rate of 32%. The better-than-expected 1Q results can be attributed to increasing utilization hour, which lowered the unit operation cost. Ongoing deleveraging also helped reduce finance cost in Longyuan.

### 6%YoY growth in wind capacity in line with our estimate.

Installed wind power capacity was 18,395MW (+6%YoY) in 1Q18 inline with management guidance. With the ongoing deleveraging, capacity growth would slow down in the next few years.

### 26%YoY increase in utilization hour

We estimate Longyuan's 1Q18 wind power utilization hour to be 642, 26% higher than 510 in 1Q17, thanks to reduced curtailment. We believe improving utilization hour would be supportive to earnings. According to our sensitivity analysis, for every 1% increase in utilization hour, 2018E earnings would grow by 2%.

### 15% YoY output growth for 2018E

Longyuan's 1Q18 wind power output grew 33% YoY, equivalent to 28% of our 2018 full-year estimate and ahead of its historical run rate at 25%. Based on the current progress, we expect the Group is likely to beat our previous 12%YoY output growth estimate and is likely to achieve 15%YoY growth.

## May operation data

### 25%YoY decline in northeast region; 17%/23% YoY growth in eastern and southern regions

Gross generation of wind power in May was 3,287GWh (+0% YoY), mainly due to the 25%YoY decline in northeast region (contributed to 16% of total power output) that offset the growth in eastern/southern regions (+17%/+23% YoY; contributed to 16%/11% of total output). We believe such differences reflect the higher level of industrial activities in the latter.

### 5M18 total power output grew 22%YoY; 15%YoY growth in output for 2018E is highly achievable

5M18 total wind power output reached 18,205GWh (+22%YoY), equivalent to 46% of our full-year estimate and was in line with the historical run rate of 44%. The Group is on track to achieve 2018E output growth of 15% YoY.

## 2018 outlook

### Wind capacity growth would stay at 6%/6%YoY in 2018E/19E.

We believe tightened liquidity in China would increase the financial burden of highly leveraged enterprises. Longyuan net gearing was 164% in 2015, but deleveraging in recent years resulted in gradual decline in net gearing to 136% in 2017. We believe Longyuan's wind power capacity would be moderate due to tightened capex and expect a 6%/6%YoY capacity growth for 2018E/19E.

### Long-term utilization hour would stay above 2,200.

1Q18 utilization was 642hr, the highest level in four years, thanks to reduced curtailment. We expect utilization hour of wind energy to improve further and Longyuan's utilization hour would remain above 2,200 going forward

### Net gearing ratio would continue to improve

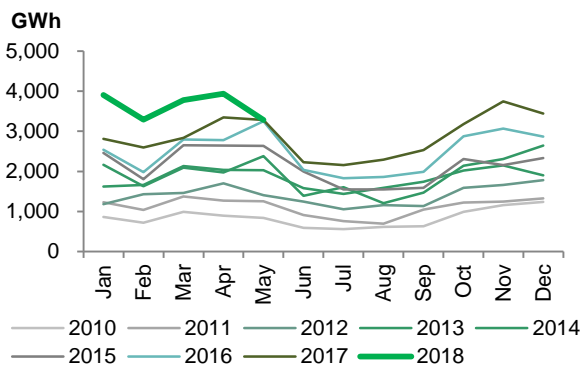
Longyuan has been deleveraging in recent years, therefore we believe net gearing would continue to trend down to 117%/103% in 2018E/19E. The Group is likely to record positive free cash flow in the next few years.

### From growth stock to cash-rich utility play; Longyuan may undergo rerating

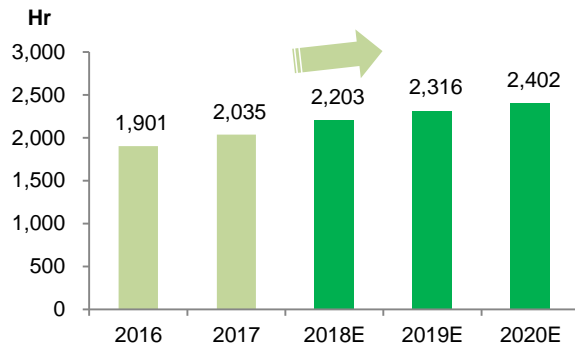
With the ongoing deleveraging, we believe Longyuan is evolving from a growth stock to a cash-rich utility stock. Rerating of the stock may occur as a result. The Group has maintained a positive free cash flow since 2015 while net gearing and capacity growth were declining. Given tightened liquidity in China, we believe a cash-cow company would appeal to investors.

**Major concern: wind power tariff would continue to trend down**

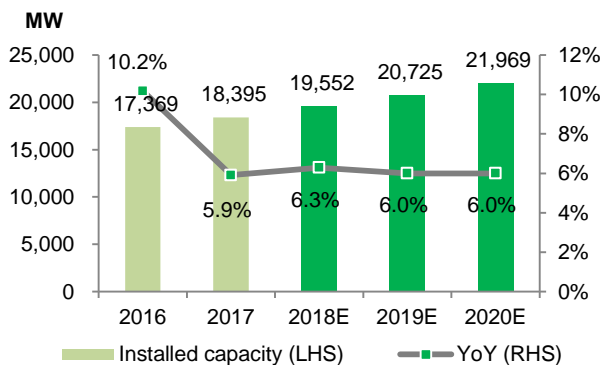
China government is now subsidizing wind power tariff by ~RMB0.1/kWh, as opposed to RMB 0.18/kWh in 2009. Aiming to reduce financial burden of the local governments, the subsidy will continue to decrease in the long run. The ultimate goal, we believe, is that the wind power operators will be able to compete with the coal-fired ones in the open market. We have factored in the tariff cut effect in our earnings forecast.

**Exhibit 24: Longyuan's monthly operation data**


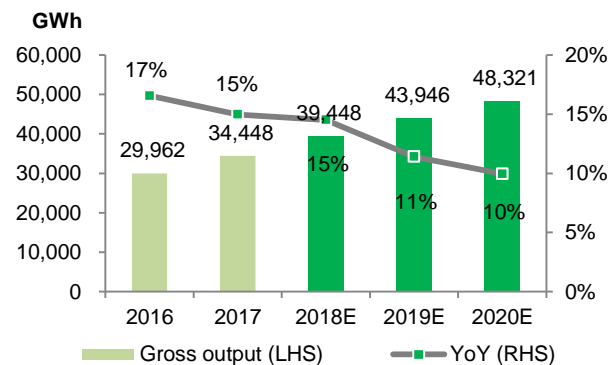
Source(s): Company, ABCI Securities

**Exhibit 25: Longyuan's utilization hour would continue to improve**


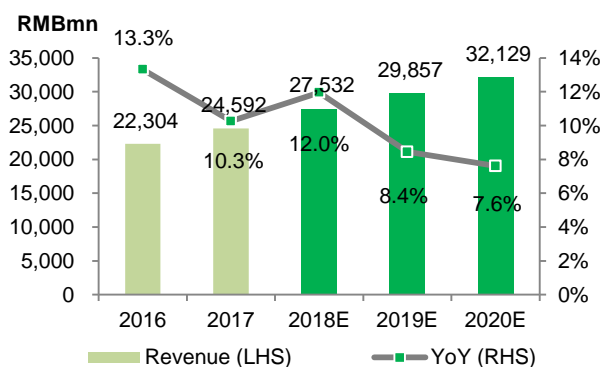
Source(s): Company, ABCI Securities estimates

**Exhibit 26: Longyuan's installed capacity outlook**


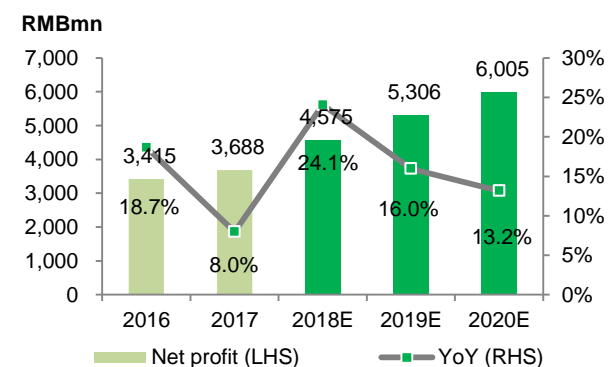
Source(s): Company, ABCI Securities estimates

**Exhibit 27: Longyuan's wind power output outlook**


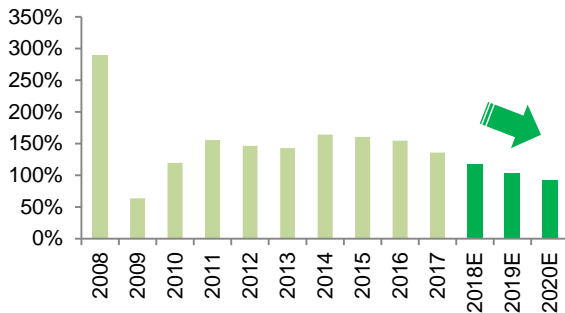
Source(s): Company, ABCI Securities estimates

**Exhibit 28: Longyuan's revenue outlook**


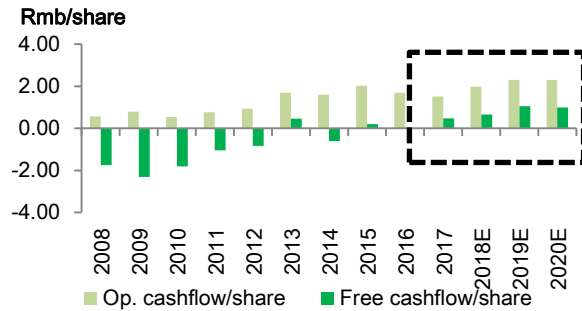
Source(s): Company, ABCI Securities estimates

**Exhibit 29: Longyuan's net profit outlook**


Source(s): Company, ABCI Securities estimates

**Exhibit 30: Longyuan's net gearing ratio would continue improve in upcoming years**


Source(s): Company, ABCI Securities estimates

**Exhibit 31: Longyuan's free cash flow per share would trend up**


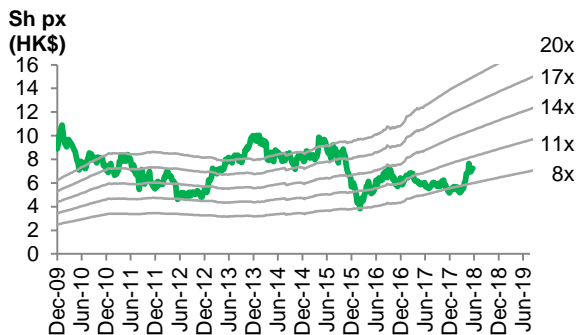
Source(s): Company, ABCI Securities estimates

## Valuation

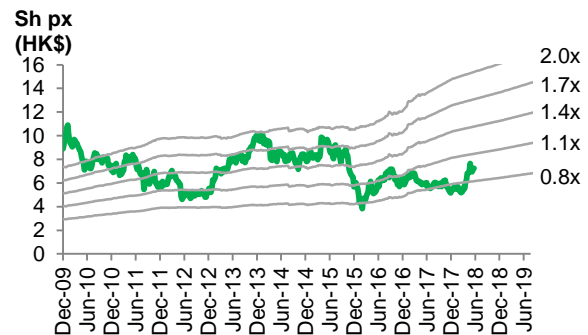
### TP at HK\$ 8.40; maintain BUY

Longyuan's 1Q18 results beat our estimate due to better-than-expected utilization hour. We revise up our utilization hour estimates by 10%/14% for 2018E/19E; our new net profit forecast was up 8%/2% for 2018E/19E. We believe Longyuan's improved utilization will drive up net profit by 24%/16%YoY in 2018E/19E.

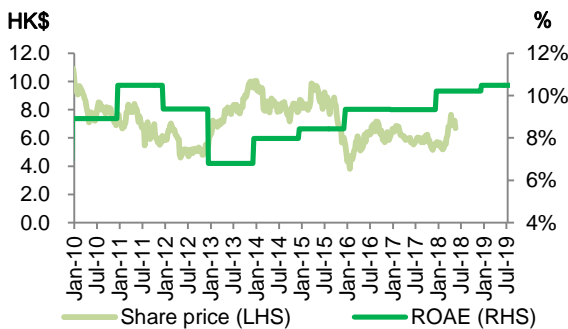
Our DCF-derived TP at HK\$8.40 (previously at HK\$ 7.50) implies 12x/10x 2018E/19E P/E and 1.1x/1.0x 2018E/19E P/B. We believe Longyuan is switching from a growth stock to a utility stock. Together with its prime assets located in wealthier regions in China, Longyuan would likely maintain a strong cash flow against the backdrop of tightened liquidity in China. Maintain **BUY**

**Exhibit 32: Longyuan's fwd P/E chart**


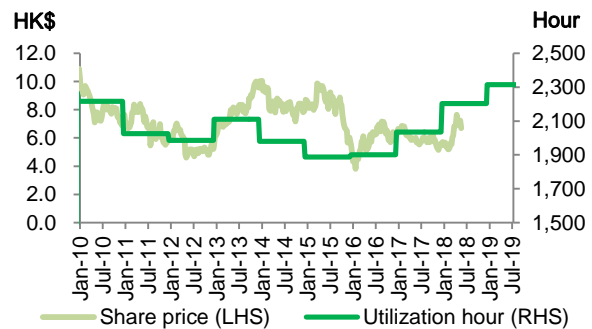
Source(s): Bloomberg, ABCI Securities estimates

**Exhibit 33: Longyuan's fwd P/B chart**


Source(s): Bloomberg, ABCI Securities estimates

**Exhibit 34: Longyuan's share price vs. ROAE**


Source(s): Bloomberg, ABCI Securities estimates

**Exhibit 35: Longyuan's share price vs. utilization hour**


Source(s): Bloomberg, ABCI Securities estimates

**Consolidated income statement**

<b>FY Ended Dec 31 (RMB mn)</b>	<b>2016A</b>	<b>2017A</b>	<b>2018E</b>	<b>2019E</b>	<b>2020E</b>
<b>Revenue</b>	<b>22,304</b>	<b>24,592</b>	<b>27,532</b>	<b>29,857</b>	<b>32,129</b>
Wind power	13,950	15,998	18,156	20,126	22,020
Coal-fired power	7,270	7,990	7,882	8,101	8,347
Other	1,085	604	1,493	1,630	1,762
<b>Cost of sales</b>	<b>(14,456)</b>	<b>(15,641)</b>	<b>(16,743)</b>	<b>(17,866)</b>	<b>(19,008)</b>
<b>Gross Profit</b>	<b>7,848</b>	<b>8,950</b>	<b>10,789</b>	<b>11,990</b>	<b>13,122</b>
SG&A expenses	(429)	(542)	(578)	(627)	(675)
Net financial income (cost)	(2,774)	(3,215)	(3,227)	(3,226)	(3,101)
Other income/ (expenses)	505	272	(45)	(91)	(240)
<b>Profit before tax</b>	<b>5,150</b>	<b>5,465</b>	<b>6,939</b>	<b>8,047</b>	<b>9,106</b>
Tax	(660)	(916)	(1,110)	(1,287)	(1,457)
<b>Net profit</b>	<b>4,490</b>	<b>4,550</b>	<b>5,828</b>	<b>6,759</b>	<b>7,649</b>
Profit attributable to:					
Minority interest	941	704	991	1,149	1,300
Perpetual medium-term note holders	133	158	262	304	344
<b>Equity shareholders of the Company</b>	<b>3,415</b>	<b>3,688</b>	<b>4,575</b>	<b>5,306</b>	<b>6,005</b>
<b>Basic EPS (RMB)</b>	<b>0.425</b>	<b>0.459</b>	<b>0.569</b>	<b>0.660</b>	<b>0.747</b>
<b>DPS (RMB)</b>	<b>0.085</b>	<b>0.092</b>	<b>0.114</b>	<b>0.132</b>	<b>0.149</b>

Source(s): Company, ABCI Securities estimates

**Consolidated balance sheet**

<b>As of Dec 31 (RMB mn)</b>	<b>2016A</b>	<b>2017A</b>	<b>2018E</b>	<b>2019E</b>	<b>2020E</b>
<b>Current assets</b>	<b>13,333</b>	<b>17,122</b>	<b>17,978</b>	<b>19,013</b>	<b>20,792</b>
Cash	1,905	5,072	4,662	3,894	5,389
Pledged and restricted bank deposits	28	33	35	35	35
Trade and bill receivables	5,901	7,155	7,931	8,428	9,177
Other receivables and prepayments	3,644	3,629	3,914	5,084	4,598
Inventories	1,040	953	1,157	1,291	1,313
Other current assets	814	280	280	280	280
<b>Non-current assets</b>	<b>125,328</b>	<b>128,513</b>	<b>135,760</b>	<b>138,783</b>	<b>141,932</b>
Property, plant & equipment	105,598	109,473	113,857	117,318	120,917
Investment properties	4	10	10	10	10
Intangible assets	8,860	8,754	8,576	8,398	8,223
Investment in JV and associates	4,483	4,472	4,830	5,218	5,636
Deferred tax assets	151	171	180	180	180
Other non-current assets	6,232	5,633	8,307	7,659	6,967
<b>Total Assets</b>	<b>138,661</b>	<b>145,635</b>	<b>153,738</b>	<b>157,796</b>	<b>162,724</b>
<b>Current Liabilities</b>	<b>55,807</b>	<b>47,159</b>	<b>46,669</b>	<b>47,328</b>	<b>46,450</b>
Trade and bill payables	2,550	1,891	1,779	2,627	2,060
Other payables	8,747	9,448	10,286	11,731	11,662
Short term borrowings	44,472	35,774	34,604	32,971	32,728
Other current assets	39	46	0	0	0
<b>Non-current liabilities</b>	<b>35,067</b>	<b>45,176</b>	<b>45,405</b>	<b>43,409</b>	<b>43,112</b>
Deferred tax liabilities	138	162	162	162	162
Long-term borrowings	31,327	41,620	42,294	40,297	40,000
Other non-current assets	3,602	3,394	2,950	2,950	2,950
<b>Total Liabilities</b>	<b>90,874</b>	<b>92,336</b>	<b>92,074</b>	<b>90,738</b>	<b>89,562</b>
<b>Minority interests</b>	<b>6,896</b>	<b>7,173</b>	<b>8,164</b>	<b>9,313</b>	<b>10,614</b>
<b>Perpetual medium-term note</b>	<b>2,991</b>	<b>4,991</b>	<b>4,991</b>	<b>4,991</b>	<b>4,991</b>
<b>Shareholders' equities</b>	<b>37,899</b>	<b>41,135</b>	<b>48,509</b>	<b>52,754</b>	<b>57,557</b>

Source(s): Company, ABCI Securities estimates



Consolidated cash flow statement

FY ended Dec 31 (RMB mn)	2016A	2017A	2018E	2019E	2020E
Profit before tax	5,150	5,465	6,939	8,047	9,106
Change in depreciation and amortization	6,342	6,798	7,682	8,197	8,743
Change in Working Capital	483	(2,221)	(594)	491	(920)
Net financial cost (income)	2,602	2,983	3,168	3,248	3,264
Income tax paid	(634)	(780)	(916)	(1,110)	(1,287)
Net interest received	0	0	0	0	0
Others	(411)	(115)	(358)	(388)	(418)
<b>Operating cash flow</b>	<b>13,533</b>	<b>12,131</b>	<b>15,921</b>	<b>18,485</b>	<b>18,487</b>
Capex	(13,990)	(9,104)	(11,566)	(11,145)	(11,813)
Increase in intangible assets	0	0	(320)	(336)	(352)
Others	2,781	491	208	255	235
<b>Investing cash flow</b>	<b>(11,209)</b>	<b>(8,614)</b>	<b>(11,677)</b>	<b>(11,225)</b>	<b>(11,931)</b>
Net Capital raise	0	0	0	0	0
Net debt financing	792	3,564	(497)	(3,630)	(540)
Dividend payout	(1,306)	(1,297)	(738)	(915)	(1,061)
Interest paid	(3,149)	(2,938)	(3,423)	(3,483)	(3,460)
Others	379	318	0	0	0
<b>Financing cash flow</b>	<b>(3,284)</b>	<b>(352)</b>	<b>(4,658)</b>	<b>(8,027)</b>	<b>(5,062)</b>
<b>Net change in cash</b>	<b>(961)</b>	<b>3,165</b>	<b>(414)</b>	<b>(768)</b>	<b>1,495</b>
Cash at the beginning	2,887	1,905	5,076	4,662	3,894
Adjustment (Time deposit & FX effect)	(21)	2	0	0	0
<b>Cash at the end</b>	<b>1,905</b>	<b>5,072</b>	<b>4,662</b>	<b>3,894</b>	<b>5,389</b>

Source(s): Company, ABCI Securities estimates

Key ratio

FY ended Dec 31 (RMB mn)	2016A	2017A	2018E	2019E	2020E
<b>Sales mixed (%)</b>					
Wind power	62.54	65.06	65.94	67.41	68.54
Coal-fired power	32.59	32.49	28.63	27.13	25.98
Other	4.86	2.46	5.42	5.46	5.49
<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	35.19	36.40	39.19	40.16	40.84
Operating profit margin	33.84	33.90	35.62	36.45	36.69
Pre-tax margin	23.09	22.22	25.20	26.95	28.34
Net profit margin	20.13	18.50	21.17	22.64	23.81
Selling & administrative expenses/revenue	1.92	2.20	2.10	2.10	2.10
Effective tax rate	12.82	16.75	16.00	16.00	16.00
<b>Growth (%)</b>					
Revenue	13.32	10.26	11.96	8.44	7.61
Gross profit	2.75	14.04	20.54	11.14	9.43
Operating profit	5.83	10.46	17.65	10.97	8.31
Net profit	10.38	1.34	28.10	15.97	13.16
<b>Balance sheet ratios</b>					
Current ratio (x)	0.24	0.36	0.39	0.40	0.45
Quick ratio (x)	0.14	0.26	0.27	0.26	0.31
Cash ratio (x)	0.03	0.11	0.10	0.08	0.12
Trade and bill receivables days	83.00	96.89	100.00	100.00	100.00
Trade and bill payables turnover days	56.21	51.81	40.00	45.00	45.00
Inventory turnover days	26.77	23.26	23.00	25.00	25.00
Total debt / equity ratio (%)	200.00	188.15	158.52	138.89	126.36
Net debt / equity ratio (%)	154.58	135.63	117.09	103.40	91.99
<b>Returns (%)</b>					
ROAA	2.5	2.6	3.1	3.4	3.7
ROAE	9.4	9.3	10.2	10.5	10.9
Payout ratio	20.00	20.00	20.00	20.00	20.00

Source(s): Company, ABCI Securities estimates



# Huaneng Renewables (958 HK)

## A cash-rich utility play

- 5M18 power output grew 17%YoY, equivalent to 48% of our previous full-year estimate. Power output growth is likely to achieve our 2018E growth forecast at 14% YoY
- Long-term utilization hour would exceed 2,200; net profit margin would improve to 35% in 2020E.
- Free cash flow would stay positive; HNR is a cash-cow business
- Maintain **BUY** with TP of HK\$3.30 implies 7x/7x 2018E/19E P/E and 1.0x/0.9x 2018E/19E P/B.

**5M18 total power output grew 17%YoY; full-year growth rate is likely to exceed 12%YoY.** Wind power output in May grew 4% YoY and 5M18 power output rose 17%YoY, equivalent to 48% of our previous full-year estimate and above the historical run rate of 46%. Based on the current development, full-year output growth would exceed our previous forecast of 12%YoY.

**Long-term utilization hour would exceed 2,200; net profit margin would improve.** The Group reported 17%YoY power output growth in 5M18 and guided a modest 4%YoY capacity growth for 2018E. Based on the information, we estimate utilization hour would at least improve by 7% YoY. We believe the government's strong support in renewable energy would persist; therefore, we expect HNR's utilization hour would exceed 2,200 going forward. Net profit margin would improve sequentially from 29% in 2016 to 35% in 2020.

**Net profit to reach 31%/9%YoY growth in 2018E/19E.** Benefiting from 7%/3%YoY improvement in utilization hour in 2018E/19E and 4%/5%YoY growth in wind power capacity, we expect HNR to deliver 31%/9%YoY growth in net profit.

**Free cash flow would stay positive in coming years.** HNR is likely to record positive free cash flow in coming years after aggressive expansion in 2008-16. We believe slower but new capacity of higher utilization hour would enhance profitability. We believe cash-rich nature of the Group against a backdrop of tightened liquidity in the country may trigger rerating.

**Maintain BUY with TP of HK\$3.30.** Overall, HNR's 5M18 power output data is better than expected but its new capacity growth guidance is lower than our previous forecast. We expect HNR's net profit to increase by 27%/9%YoY for 2018E/19E. Our DCF-derived TP at HK\$3.30 (HK\$3.00 previously) implies 7x/7x 2018E/19E P/E and 1.0x/0.9x 2018E P/B.

**Risks.** 1) Power curtailment; 2) Wind resources risk; 3) Tariff risk; 4) Construction risks; 5) Fundraising risk; 6) Government policy to deleverage may constrain growth.

## Company Report

June 29, 2018

Rating: BUY

TP: HK\$ 3.30

Analyst : Kelvin Ng

Tel: (852) 2147 8869

Email: kelvinn@abci.com.hk

Share price (HK\$)	2.68
Est. share price return	23.1%
Est. dividend yield	2.5%
Est. total return	25.6%

Source(s): Bloomberg, ABCI Securities

### Key Data

52Wk H/L(HK\$)	3.5/2.3
Issued shares (mn)	10,567
Issued H-shares (mn)	5,031
Market cap (HK\$ mn)	29,586
H-share Market cap (HK\$mn)	14,087
3-mth avg daily turnover(HK\$ mn)	80
Major shareholder(s) (%)	
Huaneng Group	54.0%

Source(s): Company, ABCI Securities

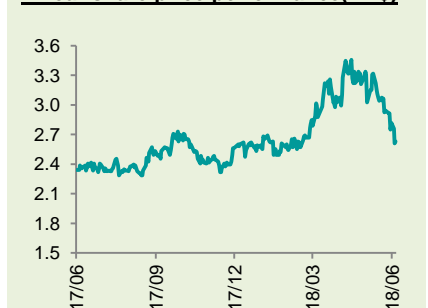
### Sector Performance

	Absolute	Relative*
1-mth	(15.0)	(5.8)
3-mth	(6.8)	2.6
6-mth	3.8	10.8

\*Relative to HSCEI

Source(s): Bloomberg, ABCI Securities

### 1-Year share price performance(HK\$)



Source(s): Bloomberg, ABCI Securities

### Results and Valuation

FY ended Dec 31	2016A	2017A	2018E	2019E	2020E
Revenue (RMB mn)	9,239	10,554	11,835	12,614	13,346
Chg (% YoY)	25.6	14.2	12.1	6.6	5.8
Net profit (RMB mn)	2,659	3,012	3,948	4,288	4,627
Chg (% YoY)	43.0	13.3	31.1	8.6	7.9
EPS (RMB)	0.273	0.294	0.374	0.406	0.438
Chg (% YoY)	42.9	7.5	27.2	8.6	7.9
1.83	2.070	2.400	2.655	3.000	3.373
Chg (% YoY)	13.1	15.9	10.6	13.0	12.4
P/E (x)	7.84	7.29	5.73	5.28	4.89
P/B (x)	1.04	0.89	0.81	0.71	0.64
ROE (%)	14.02	13.46	15.00	14.35	13.75
ROA (%)	3.17	3.51	4.44	4.64	4.84
DPS (RMB)	0.041	0.044	0.056	0.061	0.066
Yield (%)	1.91	2.07	2.62	2.84	3.07
Net gearing (%)	230.2	185.7	164.2	143.2	121.4

Source(s): Bloomberg, ABCI Securities estimates



## May operation data

HNR's wind power output in May was 2,140GWh (+4% YoY), mainly due to 15%/8%YoY decline in Inner Mongolia and northeast regions (contributed 21%/19% of overall output), offsetting the 45% YoY growth in southern region (contributed to 28% of overall output)

### Strong performance in southern region

May wind power output in southern region was up 45% YoY, contributing to 28% of HNR's total power output for the month. The strong performance could be attributed to the recovery of economic activities in southern China.

### 5M18 total power output grew 17%YoY, full-year growth is likely to exceed 12%YoY

5M18 wind power output reached 11,511GWh (+17%YoY), representing 48% of our full-year estimate and ahead of historical average run rate of 46%. Based on the current development, we believe HNR is likely to exceed our previous 2018 full-year power output growth estimate at 12%YoY.

## 2018 outlook

### Wind capacity would expand by 4%/5% YoY for 2018E/19E

We believe tightened borrowing in China would lead to slowdown in capacity growth among wind power operators. We estimate HNR would add 0.45GW/0.56GW of new capacity in 2018E/19E, suggesting only a 4%/5%YoY capacity growth, lower than our previous forecast of 11%/10%YoY growth.

### Long-term utilization hour would exceed 2,200; net profit margin would improve

The Group reported a 17% YoY increase in power output in 5M18 and guided a modest 4%YoY capacity growth for 2018. We believe China's strong support for renewable energy would persist and expect HNR's utilization hour to stay above 2,200 going forward. Net profit margin would improve continuously from 29% in 2016 to 35% in 2020, suggesting the Group is switching its focus to higher profitability from aggressive capacity expansion.

### Wind power output to grow by 14%YoY in 2018E on improved utilization

We expect HNR's 2018 wind power output to increase by 14%YoY on improving utilization. The Group's 5M18 wind power output was 11,511GWh, up 17% YoY, equivalent to 48% of our previous estimates and ahead of its historical average run rate of 46%. We expect utilization hour and wind power output would continue to trend up with policy support and estimate a wind power output growth at 14%YoY for 2018E.

### Net profit to grow 31%/9%YoY in 2018E/19E on increasing power output

Benefiting from 7%/3%YoY improvement in utilization hour in 2018E/19E and 4%/5%YoY growth in wind power capacity, we expect HNR's net profit to rise by 31%/9%YoY.

### Free cash flow to stay positive in coming years

HNR is likely to record a positive free cash flow in coming years after aggressive expansion in 2008-2016, during which the Group recorded a negative free cash flow. We believe slower but quality capacity growth (i.e. capacity with high utilization hour) would enhance profitability. Its cash-rich business against the backdrop of tightened liquidity in China may trigger a re-rating.

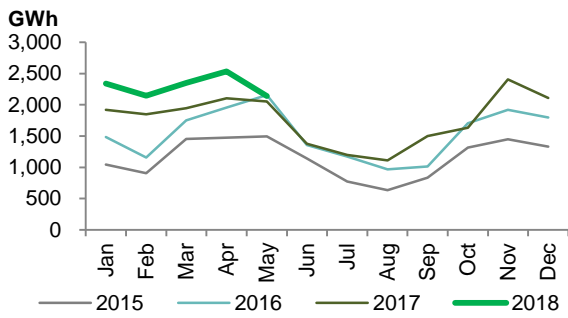
### Concern 1: Wind power tariff would decline going forward

We believe China would continue to slash wind power tariff as to lessen financial burden of local governments. According to National Energy Administration's (NEA) announcement in May 2018, all wind farms would have to compete for power prices. This new policy is subjected to all new capacity installed in 2019 including both onshore and offshore wind farms. According to industry data, current market price is RMB0.45/kWh, representing a 17%-20% discount to the benchmark price (set by the government at ~RMB 0.54/kWh incl. VAT). The new competition price would be at ~2% discount to the current market price. We believe the new policy is in line with our expectation that the Chinese government would gradually lower tariff to encourage wind power operators to compete with coal-fired energy ones in an open market. We have factored in the tariff cut effect in our earnings forecast.

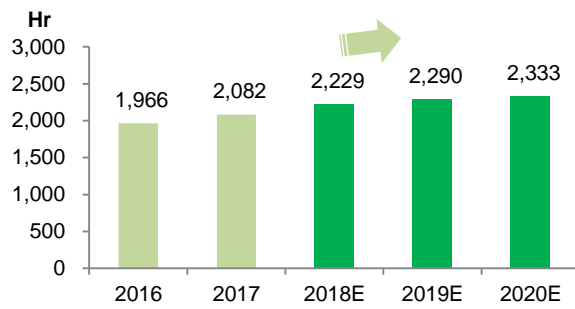
### Concern 2: More fundraising activities

HNR has completed three new share placements in 2013, 2014 and 2017; net gearing ratios in the corresponding periods were 183%, 215% and 186%. New share issuance remains to be a viable option for the Group if more funding is needed.

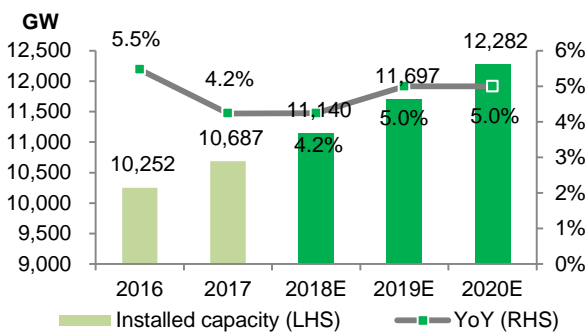


**Exhibit 36: HNR's monthly operation data**


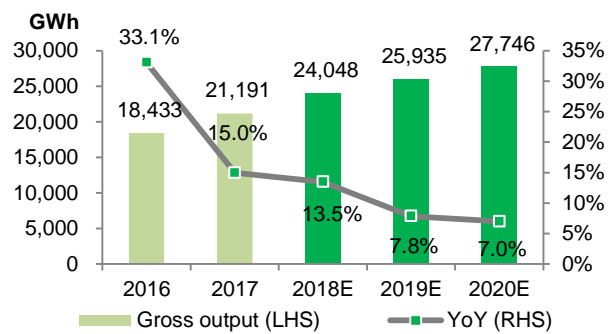
Source(s): Company, ABCI Securities

**Exhibit 37: HNR's utilization hour outlook**


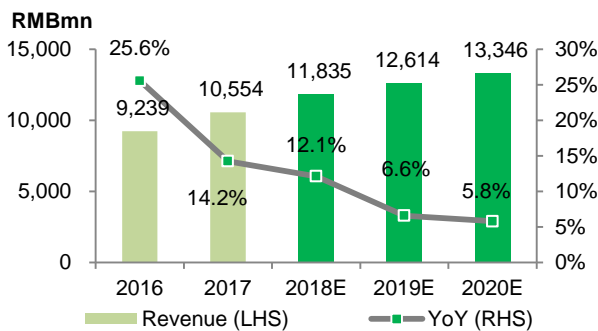
Source(s): Company, ABCI Securities estimates

**Exhibit 38: HNR's installed capacity outlook**


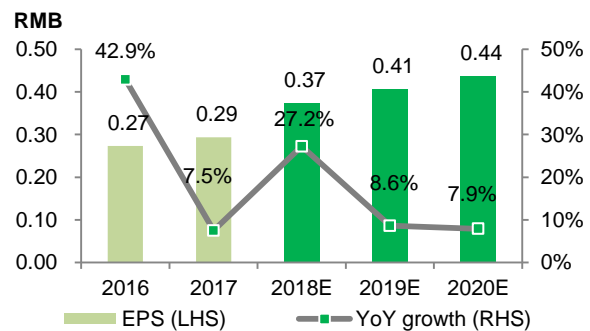
Source(s): Company, ABCI Securities estimates

**Exhibit 39: HNR's wind power output outlook**


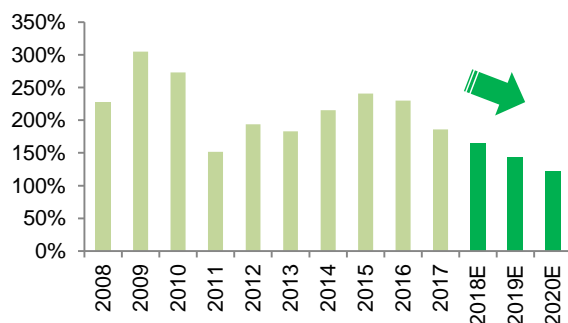
Source(s): Company, ABCI Securities estimates

**Exhibit 40: HNR's revenue outlook**


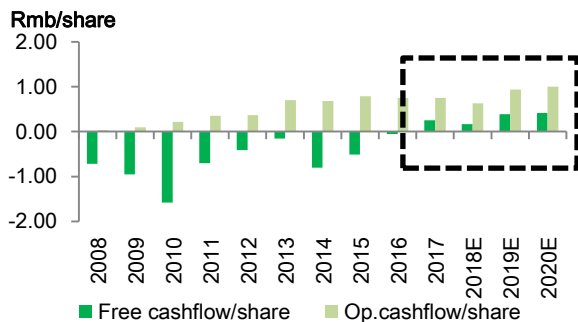
Source(s): Company, ABCI Securities estimates

**Exhibit 41: HNR's EPS outlook**


Source(s): Company, ABCI Securities estimates

**Exhibit 42: HNR's net gearing ratio would continue to improve**


Source(s): Company, ABCI Securities estimates

**Exhibit 43: HNR's free cash flow to stay positive in the next few years**


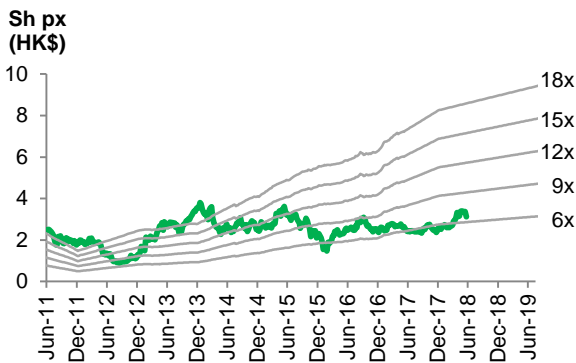
Source(s): Company, ABCI Securities estimates

## Valuation

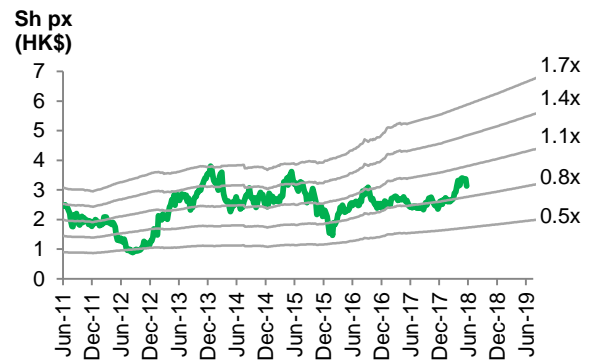
### TP at HK\$ 3.30; maintain BUY

HNR's 5M18 power output data is better than expected, however, its new capacity growth guidance is below our estimate. We revise up our utilization hour estimates by 5%/7% in 2018E/19E while slashing capacity forecast by 8%/12%. The new net profit estimates was 1% higher/2% lower than our previous estimate for 2018E/19E. Our DCF-derived TP at HK\$3.30 (previously at HK\$ 3.00) implies 7x/7x 2018E/19E P/E and 1.0x/0.9x 2018E/19E P/B.

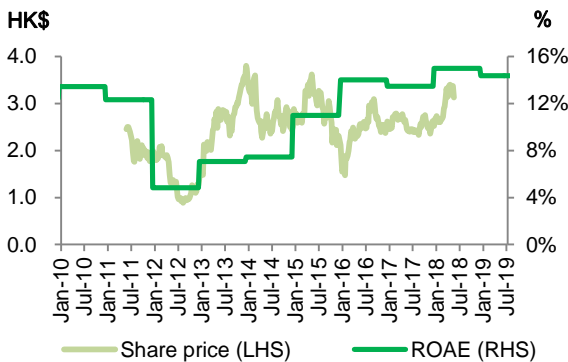
We believe HNR is transforming from a quantity play that focuses on capacity expansion to one that emphasizes on profitability. We expect the Group to record a positive free cash flow in coming years. We believe a cash-rich company will appeal to investors given the tightened liquidity in China. Maintain **BUY**.

**Exhibit 44: HNR's fwd P/E chart**


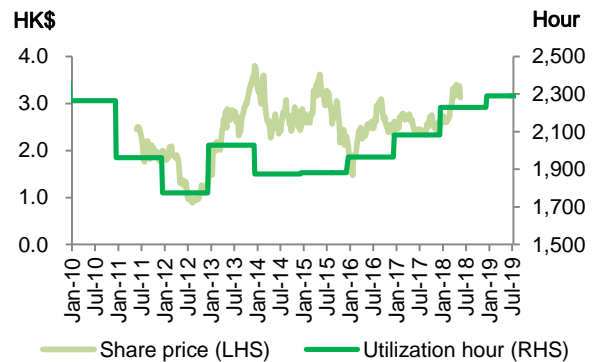
Source(s): Bloomberg, ABCI Securities estimates

**Exhibit 45: HNR's fwd P/B chart**


Source(s): Bloomberg, ABCI Securities estimates

**Exhibit 46: HNR's share price versus ROAE**


Source(s): Bloomberg, ABCI Securities estimates

**Exhibit 47: HNR's share price versus utilization hour**


Source(s): Bloomberg, ABCI Securities estimates



**Consolidated income statement**

<b>FY Ended Dec 31 (RMB mn)</b>	<b>2016A</b>	<b>2017A</b>	<b>2018E</b>	<b>2019E</b>	<b>2020E</b>
<b>Revenue</b>	<b>9,239</b>	<b>10,554</b>	<b>11,835</b>	<b>12,614</b>	<b>13,346</b>
Wind power	8,512	9,700	10,879	11,616	12,303
Solar power	721	858	949	992	1,037
Other	6	(3)	6	6	6
<b>Cost of sales</b>	<b>(4,054)</b>	<b>(4,504)</b>	<b>(4,631)</b>	<b>(4,919)</b>	<b>(5,226)</b>
<b>Gross Profit</b>	<b>5,184</b>	<b>6,051</b>	<b>7,204</b>	<b>7,695</b>	<b>8,120</b>
SG&A expenses	(223)	(248)	(296)	(315)	(334)
Net financial income (cost)	(1,995)	(2,238)	(2,190)	(2,238)	(2,173)
Other income/ (expenses)	(56)	(157)	(242)	(281)	(367)
<b>Profit before tax</b>	<b>2,910</b>	<b>3,408</b>	<b>4,477</b>	<b>4,862</b>	<b>5,246</b>
Tax	(202)	(346)	(448)	(486)	(525)
<b>Net profit</b>	<b>2,708</b>	<b>3,061</b>	<b>4,029</b>	<b>4,375</b>	<b>4,721</b>
Profit attributable to:					
Minority interest	49	50	81	88	94
<b>Equity shareholders of the Company</b>	<b>2,659</b>	<b>3,012</b>	<b>3,948</b>	<b>4,288</b>	<b>4,627</b>
<b>Basic EPS (RMB)</b>	<b>0.273</b>	<b>0.294</b>	<b>0.374</b>	<b>0.406</b>	<b>0.438</b>
<b>DPS (RMB)</b>	<b>0.041</b>	<b>0.044</b>	<b>0.056</b>	<b>0.061</b>	<b>0.066</b>

Source(s): Company, ABCI Securities estimates

**Consolidated balance sheet**

<b>As of Dec 31 (RMB mn)</b>	<b>2016A</b>	<b>2017A</b>	<b>2018E</b>	<b>2019E</b>	<b>2020E</b>
<b>Current assets</b>	<b>8,696</b>	<b>11,242</b>	<b>12,160</b>	<b>13,781</b>	<b>14,112</b>
Cash	2,570	2,503	3,875	2,618	4,700
Pledged and restricted bank deposits	34	52	0	0	0
Trade and bill receivables	4,635	7,214	6,404	9,493	7,326
Other receivables and prepayments	1,415	1,396	1,847	1,609	2,047
Inventories	33	55	33	61	39
Other current assets	8	22	0	0	0
<b>Non-current assets</b>	<b>76,749</b>	<b>75,107</b>	<b>79,488</b>	<b>79,199</b>	<b>84,262</b>
Property, plant & equipment	72,107	71,406	72,433	74,138	75,921
Investment properties	0	0	0	0	0
Intangible assets	654	621	591	560	529
Investment in JV and associates	106	254	75	75	75
Deferred tax assets	3	2	2	2	2
Other non-current assets	3,879	2,824	6,387	4,425	7,735
<b>Total Assets</b>	<b>85,445</b>	<b>86,349</b>	<b>91,647</b>	<b>92,981</b>	<b>98,374</b>
<b>Current Liabilities</b>	<b>30,517</b>	<b>27,086</b>	<b>26,273</b>	<b>25,713</b>	<b>25,833</b>
Trade and bill payables	0	0	0	0	0
Other payables	7,520	6,381	5,694	5,935	6,114
Short term borrowings	22,563	20,353	20,579	19,778	19,719
Other current assets	435	352	0	0	0
<b>Non-current liabilities</b>	<b>33,933</b>	<b>33,821</b>	<b>36,403</b>	<b>34,564</b>	<b>35,809</b>
Deferred tax liabilities	20	18	18	18	18
Long-term borrowings	28,372	29,451	30,869	29,667	29,578
Other non-current assets	5,542	4,351	5,516	4,879	6,213
<b>Total Liabilities</b>	<b>64,451</b>	<b>60,907</b>	<b>62,676</b>	<b>60,277</b>	<b>61,643</b>
Minority interests	857	840	921	1,008	1,103
<b>Shareholders' equities</b>	<b>20,137</b>	<b>24,602</b>	<b>28,051</b>	<b>31,695</b>	<b>35,628</b>

Source(s): Company, ABCI Securities estimates

**Consolidated cash flow statement**

FY ended Dec 31 (RMB mn)	2016A	2017A	2018E	2019E	2020E
Profit before tax	2,708	3,061	4,029	4,375	4,721
Change in depreciation and amortization	3,447	3,783	3,893	4,131	4,382
Change in Working Capital	(844)	(1,643)	(2,992)	(332)	(199)
Net financial cost (income)	2,090	2,144	2,190	2,238	2,173
Income tax paid	(179)	(312)	(448)	(486)	(525)
Net interest received	202	346	0	0	0
Others	(85)	302	0	0	0
<b>Operating cash flow</b>	<b>7,338</b>	<b>7,681</b>	<b>6,673</b>	<b>9,925</b>	<b>10,553</b>
Capex	(7,877)	(5,117)	(4,881)	(5,797)	(6,126)
Increase in intangible assets	0	0	(8)	(8)	(8)
Others	507	927	51	78	52
<b>Investing cash flow</b>	<b>(7,370)</b>	<b>(4,191)</b>	<b>(4,837)</b>	<b>(5,728)</b>	<b>(6,082)</b>
Net Capital raise	0	1,909	0	0	0
Net debt financing	1,312	(1,157)	1,644	(2,003)	(148)
Dividend payout	(316)	(483)	(592)	(643)	(694)
Interest paid	(2,205)	(2,241)	(2,296)	(2,241)	(2,315)
Others	(650)	(555)	781	(567)	767
<b>Financing cash flow</b>	<b>(1,858)</b>	<b>(2,527)</b>	<b>(463)</b>	<b>(5,455)</b>	<b>(2,389)</b>
<b>Net change in cash</b>	<b>(1,889)</b>	<b>963</b>	<b>1,372</b>	<b>(1,257)</b>	<b>2,081</b>
Cash at the beginning	3,470	1,665	2,503	3,875	2,618
Adjustment (Time deposit & FX effect)	990	(126)	0	0	0
<b>Cash at the end</b>	<b>2,570</b>	<b>2,503</b>	<b>3,875</b>	<b>2,618</b>	<b>4,700</b>

Source(s): Company, ABCI Securities estimates

**Key ratio**

FY ended Dec 31 (RMB mn)	2016A	2017A	2018E	2019E	2020E
<b>Sales mixed (%)</b>					
Wind power	92.13	91.90	91.93	92.09	92.19
Solar power	7.80	8.13	8.02	7.86	7.77
Other	0.07	-0.03	0.05	0.05	0.05
<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	56.12	57.33	60.87	61.00	60.84
Operating profit margin	53.13	53.54	56.33	56.28	55.59
Pre-tax margin	31.49	32.29	37.83	38.54	39.31
Net profit margin	29.31	29.01	34.04	34.69	35.38
Selling & administrative expenses/revenue	2.42	2.35	2.50	2.50	2.50
Effective tax rate	6.93	10.16	10.00	10.00	10.00
<b>Growth (%)</b>					
Revenue	25.58	14.24	12.13	6.58	5.80
Gross profit	25.14	16.71	19.07	6.81	5.51
Operating profit	19.24	15.14	17.98	6.49	4.50
Net profit	42.59	13.05	31.61	8.60	7.91
<b>Balance sheet ratios</b>					
Current ratio (x)	0.28	0.42	0.46	0.54	0.55
Quick ratio (x)	0.24	0.36	0.39	0.47	0.47
Cash ratio (x)	0.09	0.09	0.15	0.10	0.18
Trade and bill receivables days	148.85	204.89	210.00	230.00	230.00
Trade and bill payables turnover days	0.00	0.00	0.00	0.00	0.00
Inventory turnover days	3.41	3.57	3.50	3.50	3.50
Total debt / equity ratio (%)	252.94	202.44	183.41	156.00	138.37
Net debt / equity ratio (%)	230.21	185.71	164.21	143.19	121.42
<b>Returns (%)</b>					
ROAA	3.2	3.5	4.4	4.6	4.8
ROAE	14.0	13.5	15.0	14.4	13.7
Payout ratio	15.00	15.09	15.00	15.00	15.00

Source(s): Company, ABCI Securities estimates



## Datang Renewable (1798 HK)

### High exposure in “Three-North” regions and net gearing are concerns

- Datang Renewable’s (DTR) 1Q18 results beat our estimates
- Installed wind power capacity would grow by 6%/8%YoY in 2017E/18E
- High exposure in “Three -North” regions means high fluctuations in utilization hour, posing threats to earnings
- Net gearing ratio would stay high at 300% would prompt fundraising concern and may increase finance cost rate
- Maintain **HOLD** with TP of HK\$1.50, which implies 11x/7x 2018E/19E P/E and 0.6x/0.5x 2018E/19E P/B.

**1Q18 net profit grew 375%, exceeding our estimate.** DTR’s 1Q18 results, by China GAAP, were as follows: revenue was RMB2.3bn (+44%YoY); net profit was RMB 585mn (+375% YoY, due to low base in 1Q17 at RMB 123mn). Revenue was equivalent to 29% of our full-year estimate, ahead of the historical run rate of 24%; Net profit was equivalent to 140% of our previous full-year estimate.

**High exposure in “Three-North” regions poses threats to earnings.** DTR has high exposure in “Three-North” regions (Inner Mongolia, northeast and northwest regions). As of end-2017, 70% of its existing capacity was located in these regions (vs. Longyuan’s 51% and HNR’s 48%). Utilization hour in these regions is usually lower and shows more fluctuations due to the less boisterous economy.

**Net gearing ratio to stay at ~300%, which prompts fundraising concerns.** After rapid expansion in previous years, DTR’s net gearing surged to 324% in 2017 the highest level since 2008. High net gearing may increase fundraising need as tightened liquidity in China has pushed up lending rate

**Maintain HOLD with TP of HK\$1.50.** DTR’s 1Q18 results are better than expected and revise up our utilization assumptions. Our new DCF-derived TP at HK\$1.50 (previously at HK\$0.80) which implies 11x/7x 2018E/19E P/E and 0.6x/0.5x 2018E/19E P/B. We believe DTR’s high exposure in “Three-North” region and net gearing ratio would pose threats to future earnings. 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	2016A	2017A	2018E	2019E	2020E
Revenue (RMB mn)	5,786	7,104	7,899	9,096	10,096
Chg (% YoY)	3.5	22.8	11.2	15.2	11.0
Net profit (RMB mn)	198	728	965	1,384	1,580
Chg (% YoY)	1,345.5	267.1	32.6	43.5	14.2
EPS (RMB)	0.03	0.08	0.11	0.16	0.18
Chg (% YoY)	1,331.6	209.2	32.6	43.5	14.2
BVPS (RMB)	1.49	1.32	1.67	1.83	2.00
Chg (% YoY)	0.1	-11.8	26.5	9.8	9.3
P/E (x)	40.74	13.18	9.94	6.93	6.07
P/B (x)	0.74	0.84	0.67	0.61	0.55
ROE (%)	1.83	6.53	7.48	9.16	9.55
ROA (%)	0.31	1.04	1.32	1.74	1.84
DPS (RMB)	0.012	0.015	0.022	0.032	0.037
Yield (%)	1.08	1.37	2.01	2.89	3.30
Net gearing (%)	314.8	323.9	269.7	262.8	251.4

Source(s): Bloomberg, ABCI Securities estimates

## Company Report

June 29, 2018

Rating: **HOLD**

TP: **HK\$ 1.50**

Analyst : **Kelvin Ng**

Tel: **(852) 2147 8869**

Email: **kelvinn@abci.com.hk**

Share price (HK\$)	1.36
Est. share price return	10.3%
Est. dividend yield	2.0%
Est. total return	12.3%

Source(s): Bloomberg, ABCI Securities

#### Key Data

52Wk H/L(HK\$)	1.79/0.79
Issued shares (mn)	7,274
Issued H-shares (mn)	2,501
Market cap (HK\$ mn)	10,474
H-share market cap (HK\$ mn)	3,602
3-mth avg daily turnover(HK\$ mn)	4.4
Major shareholder(s) (%)	
Datang Group	57.4%

Source(s): Company, ABCI Securities

#### Sector Performance

	Absolute	Relative*
1-mth	(13.8)	(4.7)
3-mth	23.6	33.0
6-mth	44.0	50.9

\*Relative to HSCEI

Source(s): Bloomberg, ABCI Securities

#### 1-Year share price performance(HK\$)



Source(s): Bloomberg, ABCI Securities



## 1Q18 operation and results

### 1Q18 wind power output grew 46%YoY, exceeding our estimates

1Q18 total wind power output was 4,892GWh (+46%YoY), equivalent to 30% of our previous full-year estimate and ahead of its historical run rate of 25%. We believe the strong power output was attributable to strong performance in northeast and Inner Mongolia regions, which grew 76%/37%YoY. The two regions contributed to 18%/38% of DTR's total power output.

### 1Q18 net profit grew 375% on low base

Based on China GAAP, 1Q18 revenue was RMB 2,285mn (+44%YoY), mainly driven by growth in wind power output. Net profit was RMB 585mn, up 375% YoY due to low base in 1Q17 (RMB 123mn). Revenue was equivalent to 29% of our full-year estimate and ahead of historical run rate of 24%; Net profit was equivalent to 140% of our full-year estimate. This set of results was better than expected.

## 2018 outlook

### Installed wind power capacity would expand by 6%/8%YoY in 2018E/19E

According to the management, DTR targeted to add 400MW-600MW of wind power capacity in 2018, equivalent to ~6% of DTR's existing capacity. We believe the Company would add ~700MW of new capacity in 2019E, driving up capacity by 8% YoY for the year. We believe capacity growth would be at the single-digit level as declining tariff will prompt operators to focus on profitability instead of capacity expansion.

### Utilization hour would stay above 2,000 for 2018E

DTR's utilization hour would continue to improve on supportive policies including the priority dispatch of renewable energy. Large SOE wind power operators like Longyuan (916 HK, BUY), Huaneng Renewables (958 HK, BUY) and DTR recorded 7%, 6% and 8% increase in utilization hour in 2017. With the continuous shift in energy structure, we expect DTR's utilization to be 2,056hr (+8%YoY) for 2018E and 2,117hr (+3%YoY) for 2019E.

### 33% YoY net profit growth in 2018E

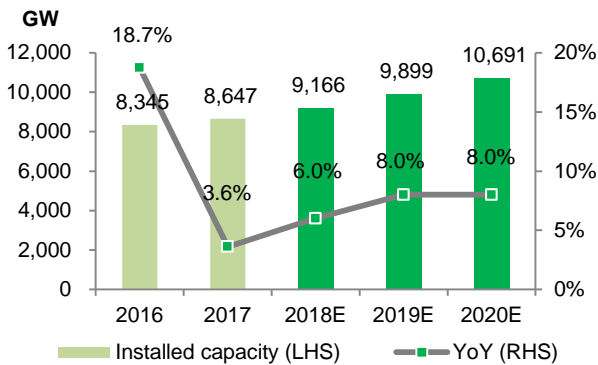
Benefit from the 8%YoY improvement in utilization hour and 6%YoY capacity growth, we expect DTR is very likely to report a 33%YoY net profit growth in 2018E due to low base in 2017(RMB 728mn).

### Concern 1: High exposure in "Three-North" regions is a threat to earnings

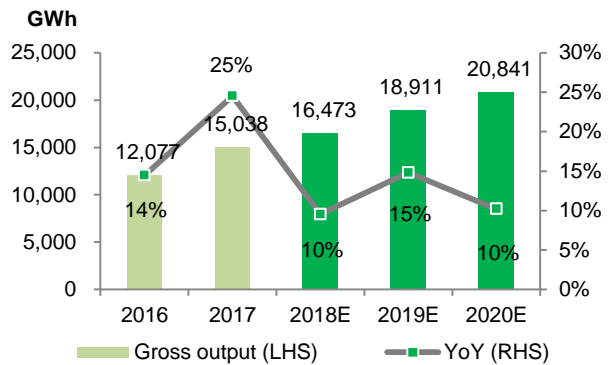
DTR has a high exposure in the "Three-North" regions (Inner Mongolia, northeast and northwest regions). As of end-2017, 70% of its existing capacity was located in these regions (vs. Longyuan's 51% and Huaneng Renewables's 48% respectively). Utilization hour in the "Three-North" region is usually lower than the national average due to the less boisterous economy. Therefore, wind power generated in these regions also transmits to other area. Dependency on demand in other regions results in more fluctuations in utilization hour and poses threat to earnings.

### Concern 2: Current net gearing ratio to stay at ~300% may prompt fund raising exercise concern

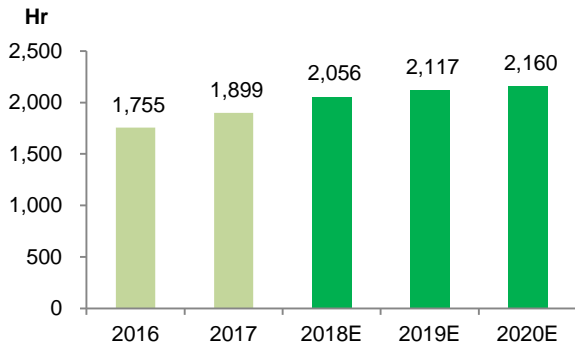
After rapid expansion in previous years, DTR's net gearing ratio rose to 324% in 2017, the highest since 2008. We believe high net gearing may increase fundraising need as tightened liquidity in China has pushed up lending rate.

**Exhibit 48: DTR's wind power capacity growth outlook**


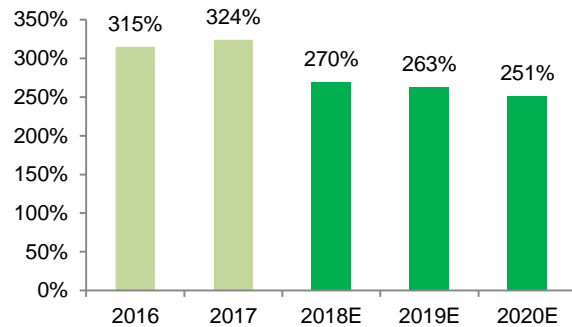
Source(s): Company, ABCI Securities estimates

**Exhibit 49: DTR's wind power output outlook**


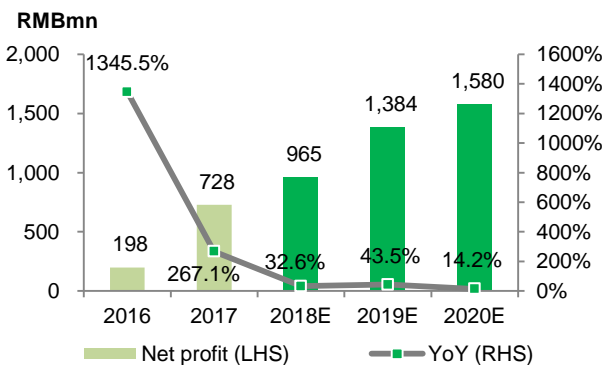
Source(s): Company, ABCI Securities estimates

**Exhibit 50: DTR's utilization hour would stay above 2,000hr**


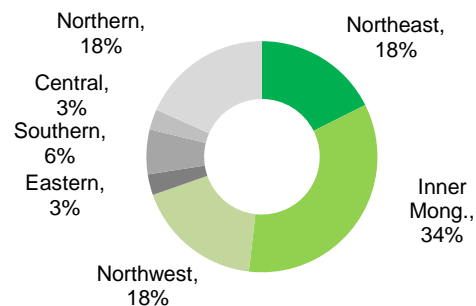
Source(s): Company, ABCI Securities estimates

**Exhibit 51: DTR's net gearing ratio to stay above 250%**


Source(s): Company, ABCI Securities estimates

**Exhibit 52: DTR's net profit outlook**


Source(s): Company, ABCI Securities estimates

**Exhibit 53: DTR has high exposure in "Three-North" regions by installed capacity (2017)**


Source(s): Company, ABCI Securities



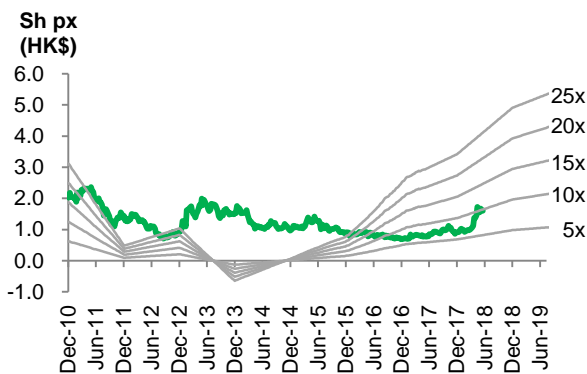
### Valuation

#### TP at HK\$ 1.50; maintain HOLD

DTR's 1Q18 results and 3M18 operation data were better than expected. We revise up utilization hour estimates by 13%/15% for 2018E/19E. Our revised net profit forecast was 130%/79% higher than our previous forecasts for 2018E/19E. Our DCF-derived TP at HK\$1.50 (previously at HK\$0.80) implies 11x/7x 2018E/19E P/E and 0.6x/0.5x 2018E/19E P/B.

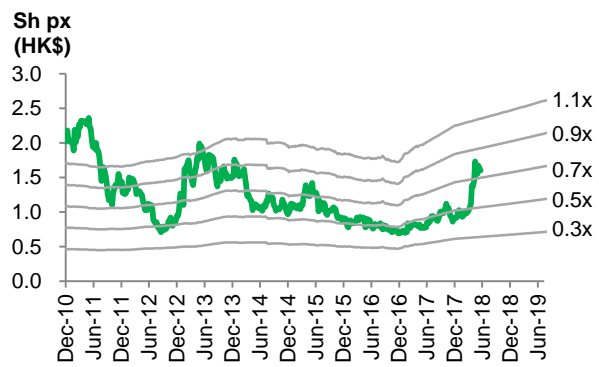
In our view, DTR would benefit the most among peers from reduction in power curtailment. However, our reservations on its fundamentals remain due to its high exposure in "Three-North" regions and heavy net gearing. We believe the current stock rally would be temporary due to the lack of actual fundamental improvement. Maintain **HOLD**.

Exhibit 54: DTR's fwd P/E chart



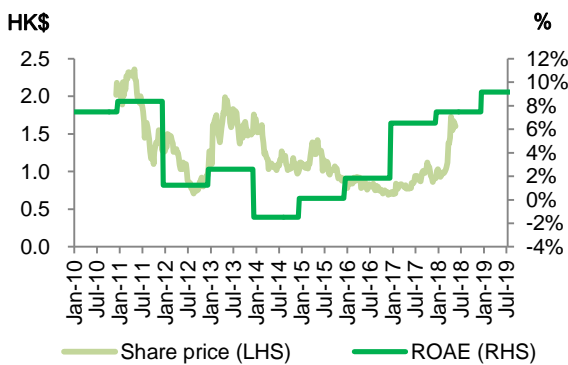
Source(s): Bloomberg, ABCI Securities estimates

Exhibit 55: DTR's fwd P/B chart



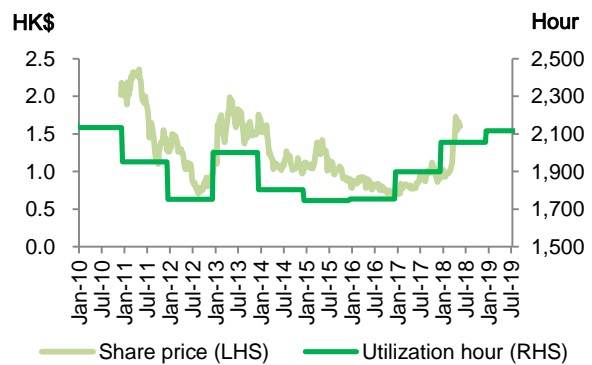
Source(s): Bloomberg, ABCI Securities estimates

Exhibit 56: DTR's share price versus ROAE



Source(s): Bloomberg, ABCI Securities estimates

Exhibit 57: DTR's share price versus utilization hour



Source(s): Bloomberg, ABCI Securities estimates



**Consolidated income statement**

FY Ended Dec 31 (RMB mn)	2016A	2017A	2018E	2019E	2020E
<b>Revenue</b>	<b>5,786</b>	<b>7,104</b>	<b>7,899</b>	<b>9,096</b>	<b>10,096</b>
Wind power	5,585	7,079	7,677	8,769	9,616
Concession construction	6	0	0	0	0
Other	195	157	222	327	481
<b>Cost of sales</b>	<b>(3,529)</b>	<b>(3,874)</b>	<b>(4,129)</b>	<b>(4,597)</b>	<b>(5,169)</b>
<b>Gross Profit</b>	<b>2,257</b>	<b>3,231</b>	<b>3,770</b>	<b>4,499</b>	<b>4,927</b>
SG&A expenses	0	0	0	0	0
Net financial income (cost)	(1,735)	(1,870)	(2,133)	(2,187)	(2,342)
Other income/ (expenses)	(121)	(302)	(130)	(150)	(116)
<b>Profit before tax</b>	<b>401</b>	<b>1,059</b>	<b>1,507</b>	<b>2,163</b>	<b>2,469</b>
Tax	(108)	(156)	(301)	(433)	(494)
<b>Net profit</b>	<b>293</b>	<b>903</b>	<b>1,206</b>	<b>1,730</b>	<b>1,975</b>
Profit attributable to:					
Minority interest	(95)	(175)	(241)	(346)	(395)
<b>Equity shareholders of the Company</b>	<b>198</b>	<b>728</b>	<b>965</b>	<b>1,384</b>	<b>1,580</b>
<b>Basic EPS (RMB)</b>	<b>0.027</b>	<b>0.084</b>	<b>0.111</b>	<b>0.160</b>	<b>0.183</b>
<b>DPS (RMB)</b>	<b>0.012</b>	<b>0.015</b>	<b>0.022</b>	<b>0.032</b>	<b>0.037</b>

Source(s): Company, ABCI Securities estimates

**Consolidated balance sheet**

As of Dec 31 (RMB mn)	2016A	2017A	2018E	2019E	2020E
<b>Current assets</b>	<b>5,631</b>	<b>7,722</b>	<b>8,677</b>	<b>9,885</b>	<b>9,391</b>
Cash	1,166	1,224	1,579	1,653	2,261
Pledged and restricted bank deposits	12	55	0	0	0
Trade and bill receivables	2,801	5,042	5,346	6,118	4,947
Other receivables and prepayments	1,537	1,262	1,551	1,938	1,935
Inventories	114	138	201	176	249
Other current assets	0	0	0	0	0
<b>Non-current assets</b>	<b>63,161</b>	<b>62,826</b>	<b>67,228</b>	<b>73,322</b>	<b>79,071</b>
Property, plant & equipment	57,914	58,088	60,866	65,879	71,738
Investment properties	21	21	0	0	0
Intangible assets	1,284	1,179	1,176	1,174	1,173
Investment in JV and associates	686	739	739	739	739
Deferred tax assets	34	24	24	24	24
Other non-current assets	3,222	2,775	4,422	5,506	5,398
<b>Total Assets</b>	<b>68,792</b>	<b>70,548</b>	<b>75,904</b>	<b>83,208</b>	<b>88,462</b>
<b>Current Liabilities</b>	<b>20,511</b>	<b>21,262</b>	<b>23,484</b>	<b>26,603</b>	<b>27,859</b>
Trade and bill payables	2,362	1,429	2,643	2,898	3,334
Other payables	7,982	6,518	6,104	7,928	7,830
Short term borrowings	10,166	13,315	14,736	15,777	16,695
Other current assets	0	0	0	0	0
<b>Non-current liabilities</b>	<b>34,576</b>	<b>34,917</b>	<b>34,794</b>	<b>37,224</b>	<b>39,364</b>
Deferred tax liabilities	24	22	22	22	22
Long-term borrowings	34,160	34,507	34,384	36,814	38,954
Other non-current assets	391	388	388	388	388
<b>Total Liabilities</b>	<b>55,086</b>	<b>56,179</b>	<b>58,278</b>	<b>63,828</b>	<b>67,223</b>
Minority interests	2,826	2,975	3,216	3,562	3,957
<b>Shareholders' equities</b>	<b>10,879</b>	<b>11,394</b>	<b>14,411</b>	<b>15,818</b>	<b>17,282</b>

Source(s): Company, ABCI Securities estimates



**Consolidated cash flow statement**

FY ended Dec 31 (RMB mn)	2016A	2017A	2018E	2019E	2020E
Profit before tax	401	1,059	1,507	2,163	2,469
Change in depreciation and amortization	2,842	3,325	3,313	3,659	4,056
Change in Working Capital	(949)	(2,898)	(701)	(59)	1,622
Net financial cost (income)	1,727	1,878	1,870	2,128	2,186
Income tax paid	(128)	(110)	(175)	(241)	(346)
Net interest received	14	13	0	0	0
Others	(24)	(61)	(28)	(32)	(35)
<b>Operating cash flow</b>	<b>3,883</b>	<b>3,205</b>	<b>5,787</b>	<b>7,618</b>	<b>9,951</b>
Capex	(6,082)	(4,503)	(6,061)	(8,641)	(9,882)
Increase in intangible assets	0	0	(28)	(29)	(31)
Others	465	(10)	0	0	0
<b>Investing cash flow</b>	<b>(5,616)</b>	<b>(4,513)</b>	<b>(6,088)</b>	<b>(8,670)</b>	<b>(9,913)</b>
Net Capital raise	0	0	1,379	0	0
Net debt financing	3,957	3,430	1,298	3,472	3,057
Dividend payout	(253)	(242)	(131)	(193)	(277)
Interest paid	(1,902)	(1,838)	(1,889)	(2,152)	(2,210)
Others	21	16	0	0	0
<b>Financing cash flow</b>	<b>1,824</b>	<b>1,366</b>	<b>656</b>	<b>1,127</b>	<b>570</b>
<b>Net change in cash</b>	<b>90</b>	<b>58</b>	<b>355</b>	<b>75</b>	<b>608</b>
Cash at the beginning	1,078	1,166	1,224	1,579	1,653
Adjustment (Time deposit & FX effect)	(2)	0	0	0	0
<b>Cash at the end</b>	<b>1,166</b>	<b>1,224</b>	<b>1,579</b>	<b>1,653</b>	<b>2,261</b>

Source(s): Company, ABCI Securities estimates

**Key ratio**

FY ended Dec 31	2016A	2017A	2018E	2019E	2020E
<b>Sales mixed (%)</b>					
Wind power	96.53	99.65	97.18	96.40	95.24
Concession construction	0.10	0.00	0.00	0.00	0.00
Other	3.37	2.21	2.82	3.60	4.76
<b>Total</b>	<b>100</b>	<b>102</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Profit &amp; loss ratios (%)</b>					
Gross margin	39.01	45.47	47.73	49.46	48.80
Operating profit margin	36.55	40.37	45.73	47.46	47.30
Pre-tax margin	6.93	14.91	19.08	23.77	24.45
Net profit margin	5.06	12.71	15.26	19.02	19.56
Selling & administrative expenses/revenue	0.00	0.00	0.00	0.00	0.00
Effective tax rate	27.01	14.76	20.00	20.00	20.00
<b>Growth (%)</b>					
Revenue	3.54	22.78	11.19	15.15	11.00
Gross profit	1.35	43.11	16.71	19.34	9.50
Operating profit	1.46	35.61	25.96	19.52	10.61
Net profit	364.62	208.32	33.58	43.48	14.17
<b>Balance sheet ratios</b>					
Current ratio (x)	0.27	0.36	0.37	0.37	0.34
Quick ratio (x)	0.19	0.30	0.29	0.29	0.26
Cash ratio (x)	0.06	0.06	0.07	0.06	0.08
Trade and bill receivables days	130.50	201.48	240.00	230.00	200.00
Trade and bill payables turnover days	190.35	178.62	180.00	220.00	220.00
Inventory turnover days	8.41	11.89	15.00	15.00	15.00
Total debt / equity ratio (%)	407.44	419.70	340.85	332.48	322.00
Net debt / equity ratio (%)	314.81	323.91	269.71	262.84	251.36
<b>Returns (%)</b>					
ROAA	0.3	1.0	1.3	1.7	1.8
ROAE	1.8	6.5	7.5	9.2	9.5
Payout ratio	44.04	17.99	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 rate $\geq$ Market return rate (10%)
Hold	- Market return rate (-10%) $\leq$ Stock return rate < Market return rate (+10%)
Sell	Stock return < - Market return (-10%)

Notes: Stock return rate: expected percentage change of share price plus gross dividend yield over the next 12 months

Market return rate: average market return rate since 2005 (HSI total return index 2005-17 CAGR at 10%)

Time horizon of share price target: 12-month

Stock rating, however, may vary from the stated framework due to factors including but not limited to: corporate governance, market capitalization, historical price volatility relative to corresponding benchmark index, average daily turnover of the stock relative to market capitalization of the stock, competitive advantages in corresponding industry, etc.

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