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中國廣核電力股份有限公司  
CGN Power Co., Ltd.

# CGN POWER (1816.HK) 2017 Interim Result

August 2017

**Disclaimer**

- This presentation contains forecast statements, which may involve risks and unforeseeable factors.
- These statements generally apply words of predicative implications, such as think, expect, estimate, plan, predict, aim at, might, would and other similar words, which are utilized to express expectations, actions to adopt in the future, or possible results brought about by these actions. You should not excessively rely on these predicative statements in the presentation.
- These predicative statements are based on the Company's own materials and other materials the Company consider reliable. The Company's actual performance might be different from these predicted figures, which might be a cause of the fluctuations of the Company's H-share price.
- This presentation contains only public data with no inside information.

## Part I

## Business Performance

## Part II

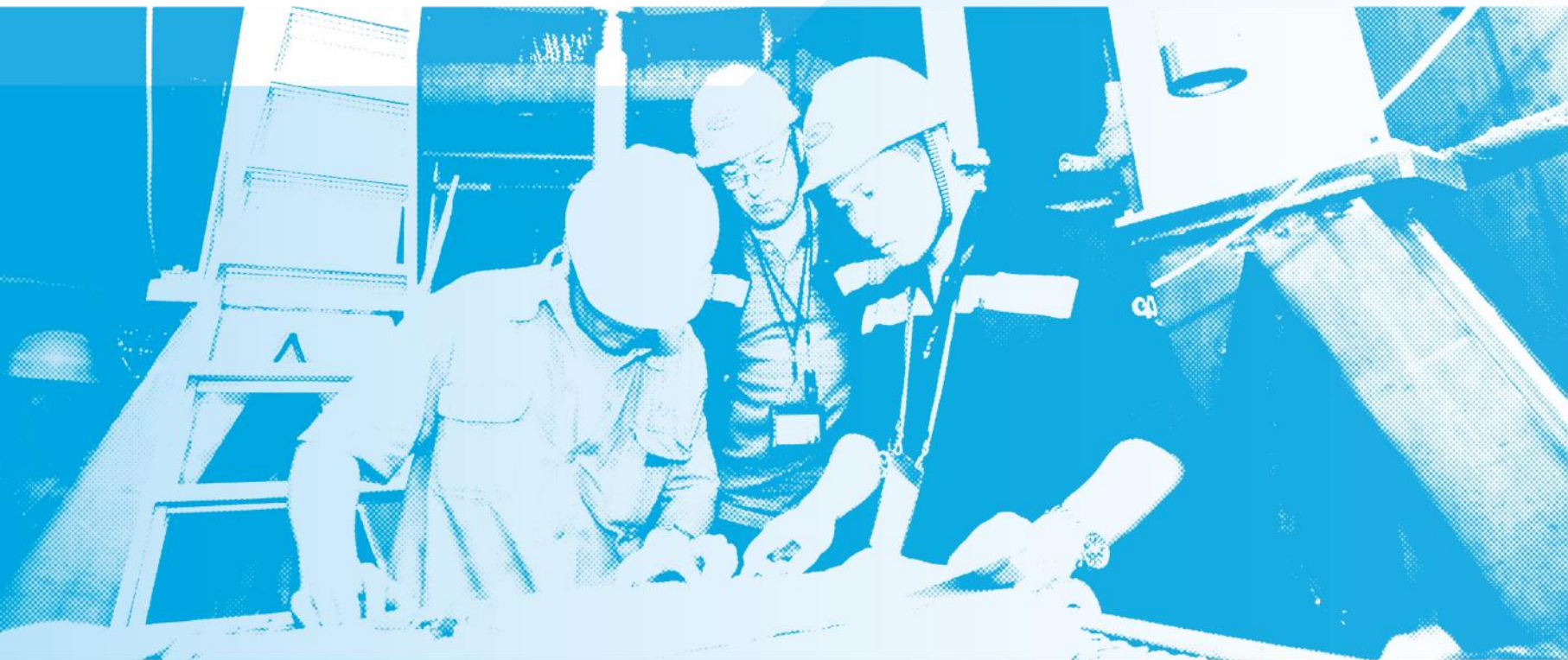
## Financial Performance

## Part III

## Q&A



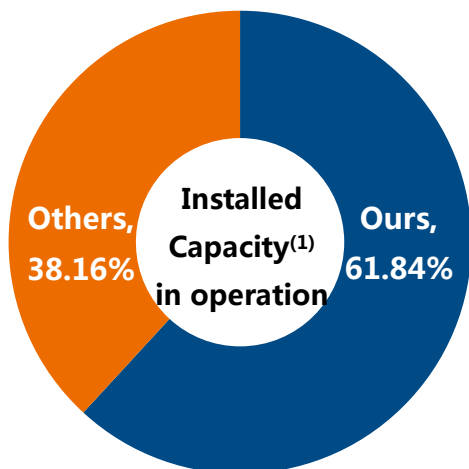
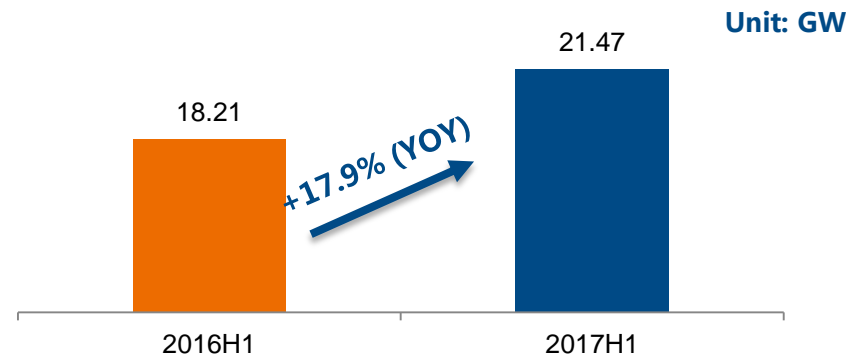
# Business Performance



### Yangjiang Unit 4 commenced commercial operation on 15 March, 2017

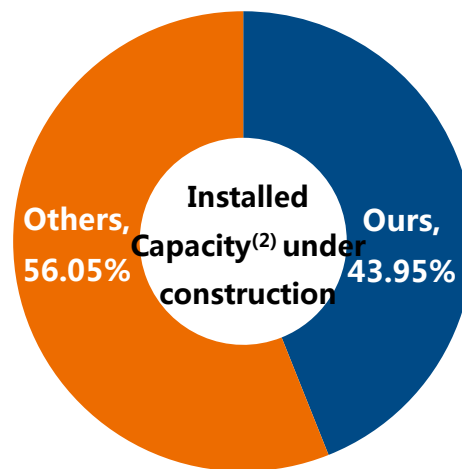


### Installed Capacity in Operation



#### Note 1: Units in Operation (as of June 30, 2017)

- **China (China Mainland, same below):** a total of 36 units in operation with a total installed capacity of 34.73GW.
- **CGN Power:** a total of 20 units in operation with a total installed capacity of 21.47 GW accounting for 61.84% market share.

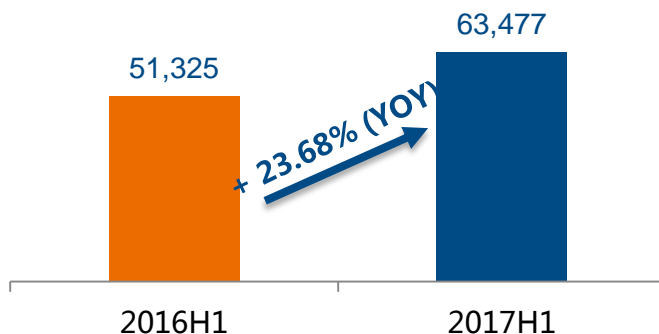


#### Note 2: Units under Construction (as of June 30, 2017)

- **China:** a total of 20 units under construction with a total installed capacity of 23.37GW.
- **CGN Power:** a total of 8 units under construction with a total installed capacity of 10.27 GW accounting for 43.95% market share.

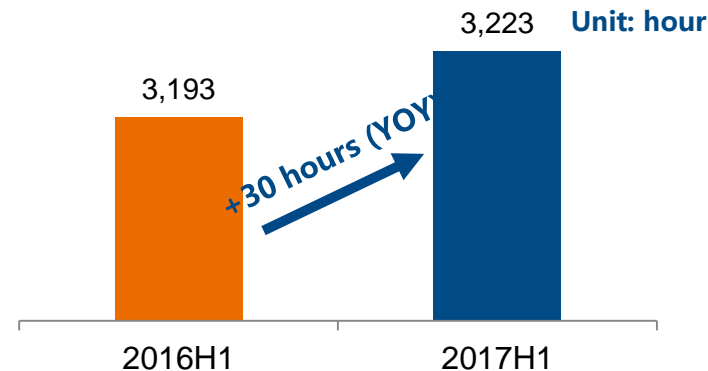
## On-grid Power Generation

Unit: GWh



## Utilization hours

Unit: hour



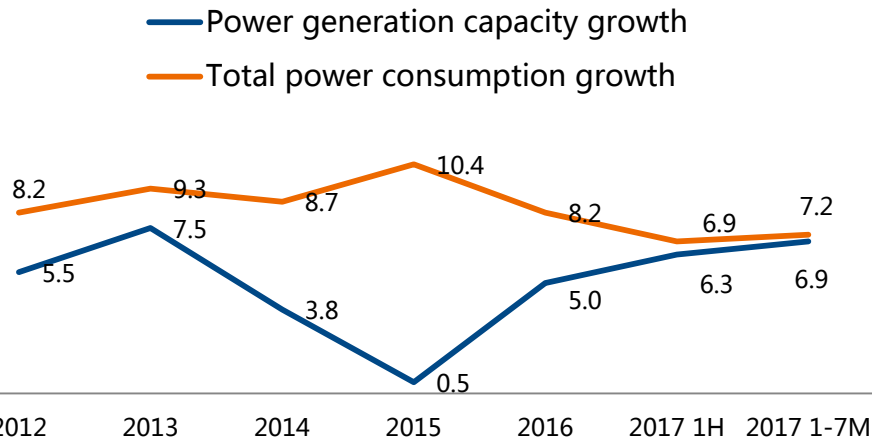
	Name	Capacity Factor(%)		Load Factor(%)		Utilization Hours		Outage	
		2017H1	2016H1	2017H1	2016H1	2017H1	2016H1	2017H1	2016H1
Subsidiaries	Daya Bay Unit 1	99.98	99.97	101.23	101.21	4,398	4,421	Annual Outage	Annual Outage
	Daya Bay Unit 2	99.99	74.72	101.00	75.41	4,388	3,294		
	Ling'ao Unit 1	78.13	99.64	77.50	98.73	3,366	4,313		
	Ling'ao Unit 2	99.07	99.99	95.21	91.77	4,135	4,009		
	Lingdong Unit 1	73.78	83.16	72.28	82.45	3,137	3,601	Annual Outage	Annual Outage
	Lingdong Unit 2	99.99	75.67	90.07	74.53	3,909	3,255	First Outage	Annual Outage
	Yangjiang Unit 1	99.99	99.99	99.87	95.27	4,256	4,161		First Outage
	Yangjiang Unit 2	99.99	55.79	92.52	56.04	4,019	2,448		
	Yangjiang Unit 3	71.30	99.98	72.98	90.60	3,170	3,957		
	Yangjiang Unit 4	99.97	Under construction	98.38	Under construction	4,274	Under construction		

	Name	Capacity Factor(%)		Load Factor(%)		Utilization Hours		Outage	
		2017H1	2016H1	2017H1	2016H1	2017H1	2016H1	2017H1	2016H1
Subsidiaries <sup>(1)</sup>	Fangchenggang Unit 1	52.77	99.01	36.62	78.67	1,591	3,436	First Outage	Annual Outage
	Fangchenggang Unit 2	96.78	Under construction	86.16	Under construction	3,743	Under construction	Annual Outage	
	Ningde Unit 1	68.23	99.99	61.76	61.10	2,683	2,669		
	Ningde Unit 2	99.81	99.61	86.14	61.08	3,742	2,668		
	Ningde Unit 3	99.99	86.20	87.40	66.70	3,797	2,913		
	Ningde Unit 4	99.80	Under construction	53.20	Under construction	2,311	Under construction		
Associates	Hongyanhe Unit 1	99.81	77.93	86.34	55.72	3,751	2,434	First Outage	Annual Outage
	Hongyanhe Unit 2	96.13	99.98	36.66	60.10	1,592	2,625		
	Hongyanhe Unit 3	65.90	99.99	31.90	38.12	1,386	1,665		
	Hongyanhe Unit 4 <sup>(2)</sup>	71.28	-	38.66	0.54	1,679	23		
Subsidiaries	Average	88.97	90.29	82.02	79.50	4,078	3,988		
Associates	Average	83.28	92.63	48.39	38.62	2,102	2,156		
Subsidiaries and Associates	Average	88.63	90.73	75.29	69.88	3,223	3,193	--	

**Note1:** Fangchenggang Nuclear has become a subsidiary of the Company in the second half of 2016 after the acquisition. Ningde Nuclear has been changed from a joint venture of the Group to a subsidiary of the Group since January 1, 2017. For the purpose of business comparison, the operating data of Ningde Nuclear for the corresponding period in 2016 is considered as the data of a subsidiary.

**Note 2:** Hongyanhe Unit 4 commenced its commercial operation on June 8, 2016, therefore, relevant data for the same period of 2016 was recalculated. According to the requirements for indicators calculation by World Association of Nuclear Operators ("WANO"), since Hongyanhe Unit 4 did not operate for one quarter during the first half of 2016, it was excluded from the calculation of capacity factor in 2016.

## Total Power Consumption Growth Recovering, While Oversupply Continuing



## Deepening of Electricity Market Reform

- **Steady Progress on Power System Reform**
  - Except Hainan province, provincial power trading centers have been set up in 30 provinces, autonomous regions and municipalities across the country in the first half of 2017.
- **The Trade Share Surging of Market Power Generation**
  - Marketized electricity trading share expanded across the country in the first half of 2017.
  - Power trading mechanisms have been improving.

## Striving for More Planned and Unplanned Power Generation as much as Possible with Favorable Tariff

- Adopting the strategy of **“striving for more shares of planned on-grid power generation, and more optimized unplanned power generation and tariff”** in order to cope with the market challenges.
- The proportion of marketized trading power generation in the first half of 2017 by all of our nuclear power plants was around 13%.

## Taking Actions for Adapting to Market Reform

- **Promoting national policies release and implementation** : Pay close attention to the enactment of nationwide and regional policies; actively promote the release and practice of “Tentative Measures on Guaranteed Consumption of Nuclear Power”.
- **Researching on Trading Strategies**: Proactively analyze new trading types; promote trading schemes that match the nuclear power technology characteristics.



## Highly Valuing Nuclear Safety Management

- Released “Nuclear Safety Management Enhancement Action Plan”.
  - General idea and target of nuclear safety management of next 5 years.
  - Key enhancement activities.
- Holding the themed forum: Strengthen nuclear safety management, eliminate potential nuclear safety hazard—to be implemented at all levels.**
  - In-depth discussion on issues about nuclear safety management improvement.
  - Rethinking existing or potential problems in safety and shortcomings in order to promote sustainable improvement on safety management level.

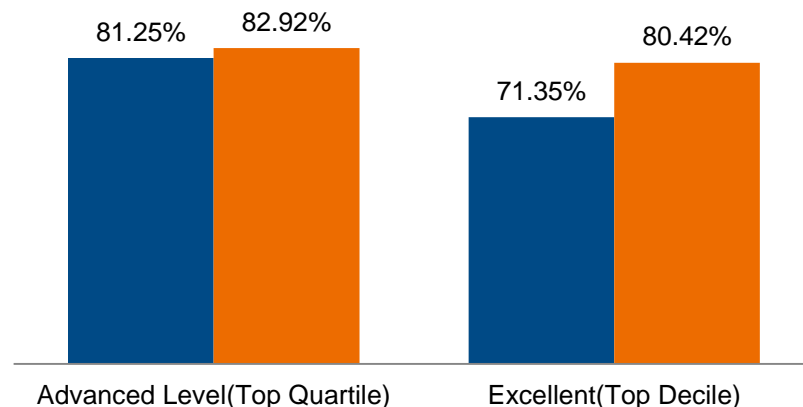
## Launching Diverse Nuclear Safety Theme Activities

- On-side Management**  
Supervisors from different levels show themselves in grass-root units and look for potential safety hazards or management problems with employees on site to stimulate improvement on safe operation management.
- Taking various actions to reinforce Employee Safety Awareness through Various Activities.**  
Nuclear power bases successively host activities such as learning from videos of safety operation and Safety Skills Competition to improve employee safety awareness.

## Continuous Improvement on Safety Management Level

- No occurrence** of operation events of level 1 or above<sup>(1)</sup> during the Reporting Period.
- Results of the 7 safety inspections by NNSA are **all in line with the national supervision requirements.**
- Safety management is under well control:**  
Conclusion from the joint inspection for nuclear power safety management special supervision by NDRC, NEA, MEP, and SASTIND.

## Steady Improvement on Performance according to WANO Indicators <sup>(2)</sup>



Note 1: Based on The International Nuclear and Radiological Event Scale (INES) issued by IAEA. ■ 2016 H1 ■ 2017 H1

Note 2: Compared with the one-year benchmark value of 12 performance indicators for each PWR set by WANO in 2016, 82.92% of 240 indicators of all 20 units in operation are among world's top quartile, and 80.42% are among world's top decile. We updated WANO indicators for the same period in 2016 because the Company has completed an acquisition in 2016 H2.

### Stabilizing Operation

- To conduct operation management, ensure nuclear power plants' safe and stable operations, so as to lay a solid foundation for marketing activity in 2017.
- To implement the planed 7 outages in the second half of 2017.

### Putting Forward Units Construction as planed

- To advance construction of units timely on the bases of insurance of safety and quality.
- To aim for being qualified for the commercial operation of Taishan Unit 1.

### Cutting Cost and Enhancing Efficiency

- To advance lean management, strengthen internal resource synergy , effectively control construction cost of units under construction and maintenance cost of units in operation.

### Increasing Income by Marketing

- To promote the practice of "Tentative Measures on Guaranteed Consumption of Nuclear Power "and "Announcement of Orderly Release the Plan of Power Consumption" in all regions .
- To strengthen communications and coordination with power grid, to ensure implementations of nuclear power units' safe and suitable operations for more power generation.
- To plan for inter-regional sale of nuclear power for obtaining channel exploration .

## Financial Performance



**1. The financial data for 2016H1 in the consolidated financial statements of the Group has been restated. Except for where specially noted, the 2016H1 financials all refer to the restated data, due to:**

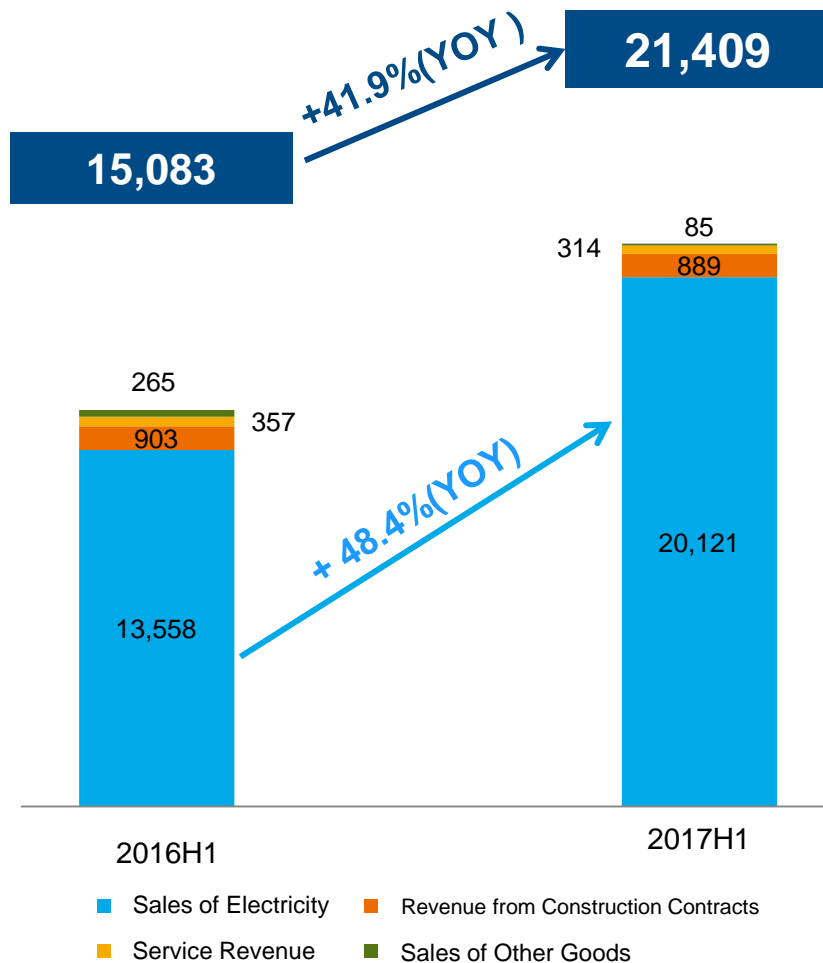
- The Company completed the acquisition of 61% equity interest in Fangchenggang Nuclear, 100% equity interest in Lufeng Nuclear and 100% equity interest in CGN Engineering held by China General Nuclear Power Corporation (CGNPC), the ultimate holding company of the Company, in November 2016.
- As the Company, Fangchenggang Nuclear, Lufeng Nuclear and CGN Engineering are under common control of CGNPC, the above acquisition has constituted a business combination under common control.
- The assets and liabilities of Fangchenggang Nuclear, Lufeng Nuclear and CGN Engineering have been recognized at the carrying amounts recognized previously in CGNPC's consolidated financial statements.

**2. Pursuant to the concert party agreement entered into between CGN Ninghe Investment Co., Ltd.(CGN Ninghe Investment), a subsidiary of the Company, and Datang International Power Generation Co., Ltd. in December 2016, Fujian Ningde Nuclear Power Co., Ltd.(Ningde Nuclear) has become a subsidiary of the Group since January 1, 2017 and has been consolidated into the Group.**

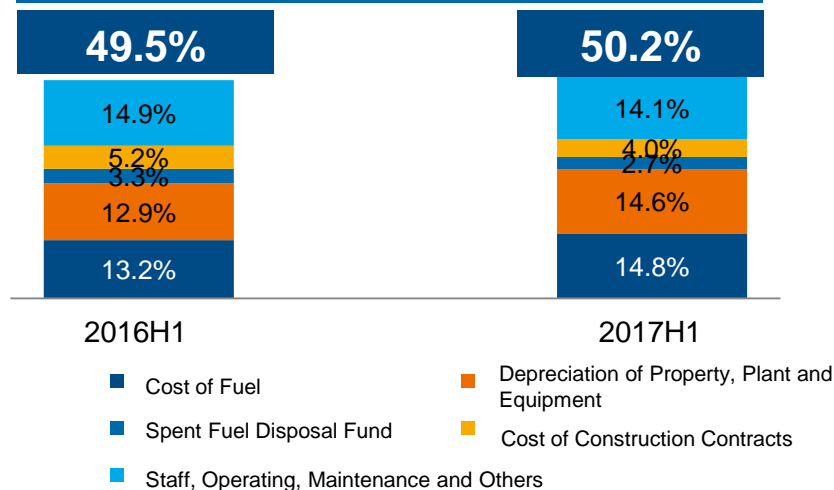
- The change of Ningde Nuclear from a joint venture to a subsidiary of the Group led to a generation of gain on remeasurement of RMB1,785,082,000 and effects on the profit for the period attributable to owners of the Company of RMB1,434,393,000.

## Revenue

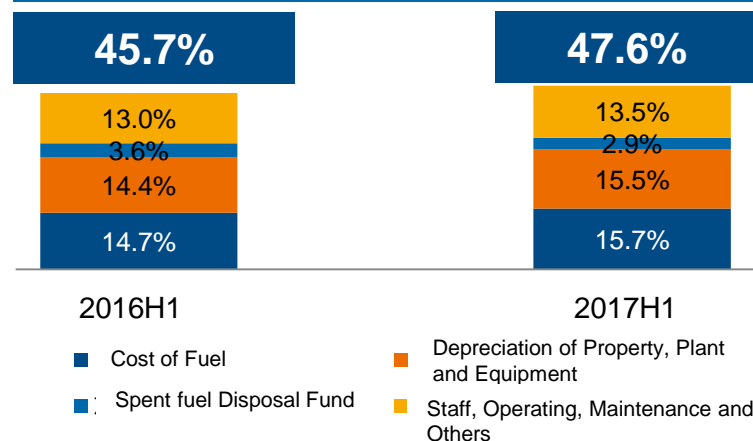
Unit: RMB MM



## Operating cost as % of revenue



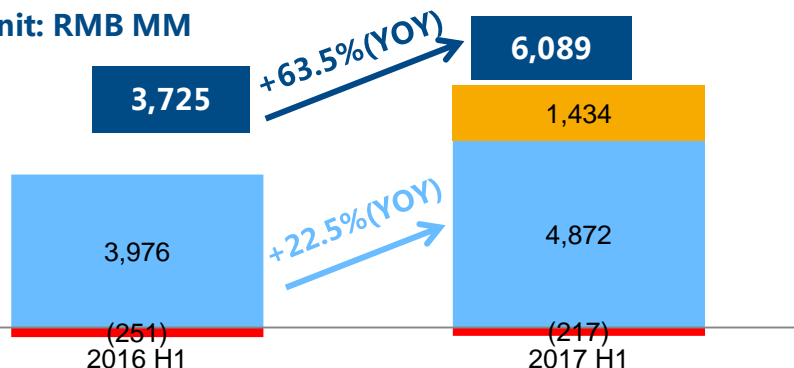
## Operating cost as % of revenue (sales of electricity business)





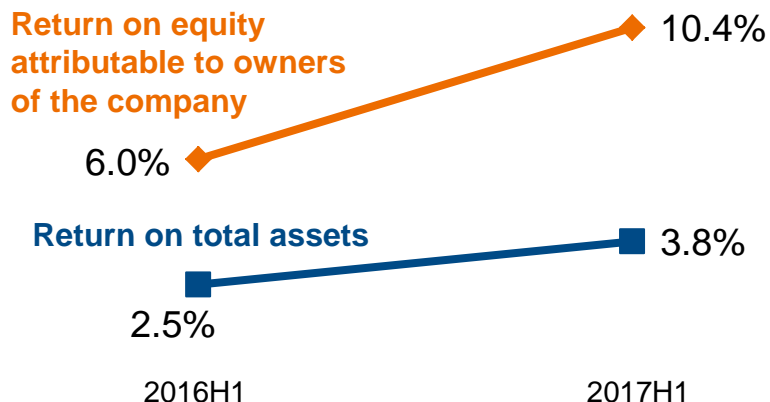
## Profit attributable to owners of the company

Unit: RMB MM



- Generating revaluation gain of Ningde nuclear becoming a subsidiary attributable to the company owners
- After deducting both gains(losses) on exchanges and Generating revaluation gain of Ningde nuclear becoming a subsidiary
- Gains(losses) on exchanges attributable to the company owners

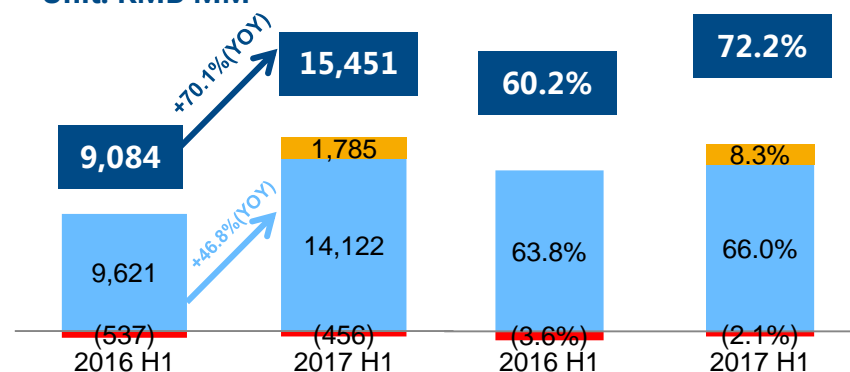
## Return on equity attributable to owners of the company <sup>(3)</sup> & return on total asset <sup>(4)</sup>



## EBITDA<sup>(1)</sup>

## EBITDA margin<sup>(2)</sup>

Unit: RMB MM



- Part of net exchange loss
- Part excluding net exchange loss and remeasurement gain of Ningde Nuclear
- Part of remeasurement gain of Ningde Nuclear,

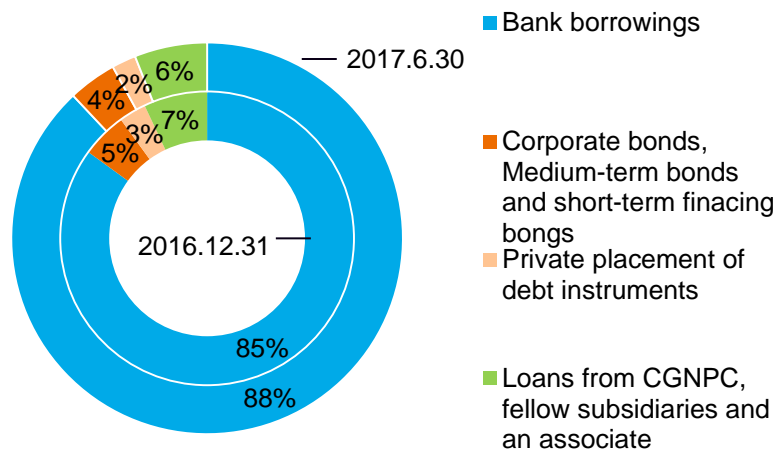
**Note1:** EBITDA = profit before taxation + finance costs + depreciation and amortization.

**Note2:** EBITDA margin = EBITDA/revenue \* 100% .

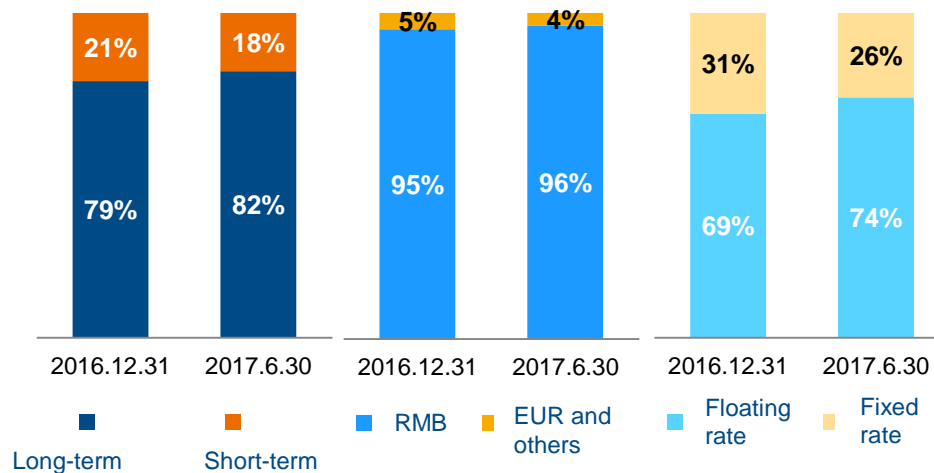
**Note 3:** Returns on equity attributable to owners of the Company= profit for the period attributable to owners of the company/average equity attributable to owners of the Company (arithmetic mean of the opening and closing balances)\* 100%.

**Note 4:** Return on total assets= ( profit before taxation + finance costs ) / the average sum of current assets and non-current assets (arithmetic mean of the opening and closing balances) \* 100%.

## Diversified financing type

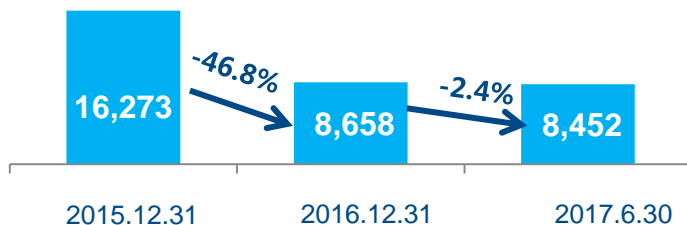


## Reasonable term, currency and rate structure



## Balance of bank borrowings and other borrowings denominated in foreign currencies

Unit: RMB MM (equivalent)



## Net foreign exchange loss

Unit: RMB MM



### Interest coverage<sup>(1)</sup> & debt to equity ratio <sup>(2)</sup>

#### Interest coverage



2016H1

2017H1

#### Debt to equity ratio



2016.12.31

2017.6.30

### Capital expenditure

Unit: RMB MM

10,632

10,707

674

2,440 <sup>(3)</sup>

9,958

8,267

2016H1

2017H1

■ PP&E

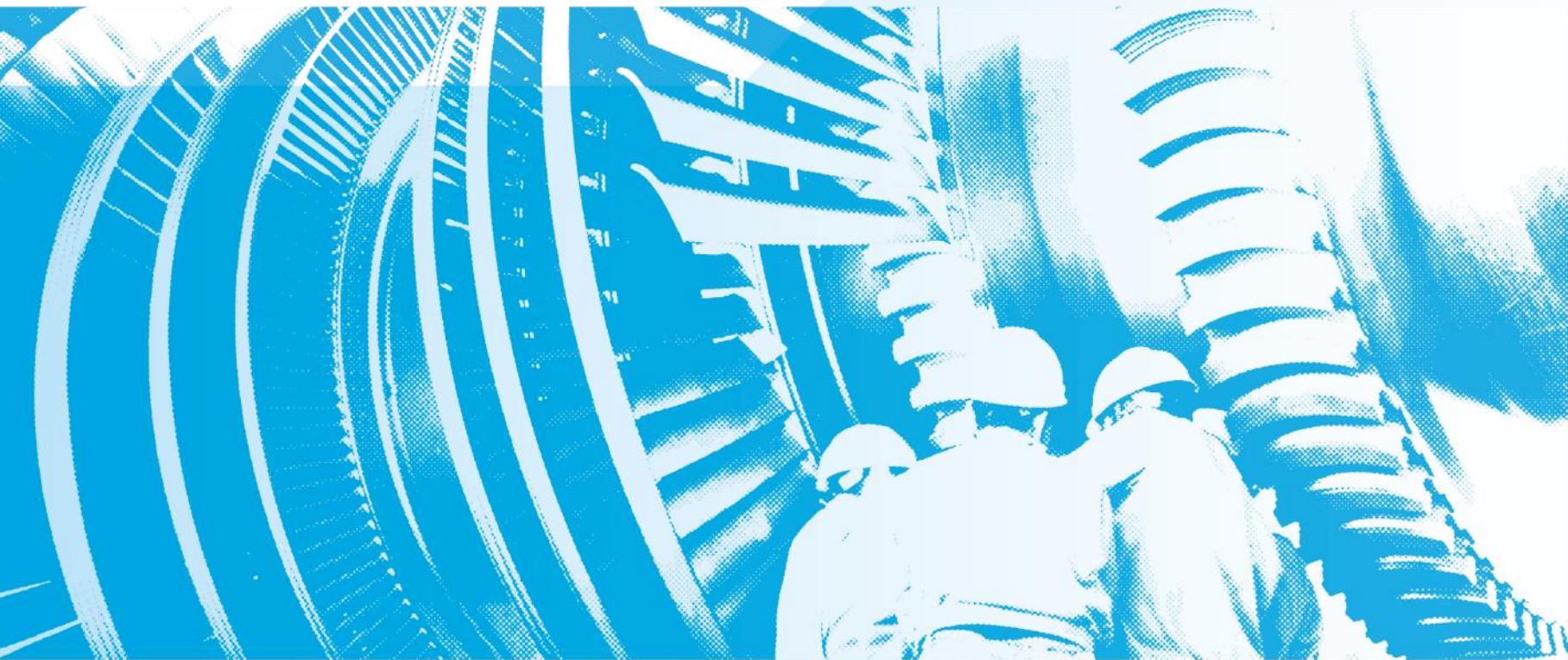
■ Equity Investment

**Note 1:** Interest coverage = (profit before taxation + finance costs) / (finance costs + capitalized interest).

**Note 2:** Debt to equity ratio = net debt (i.e., bank and other borrowings less cash and cash equivalents and other bank deposits over three months) / total equity\*100%.

**Note3:** In 2017H1 equity investment increased mainly due to partly paying for the acquisition of Fangchenggang Nuclear, Lufeng Nuclear and CGN Engineering.

## Q & A







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**Thanks!**

