



China Power International Development Limited

2016 Annual Results Presentation

24 March 2017, Hong Kong





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- **Annual Results Highlights**
- **Business Review**
- **Development and Prospects**
- **Financial Statements and Appendices**



Section 1 Annual Results Highlights



Annual Results Highlights

Income Statement	2016	2015	Change
Revenue (RMB'000)	18,866,153	20,196,670	-6.59%
Operating Profit (RMB'000)	5,350,578	7,861,789	-31.94%
Profit Attributable to Owners of the Company (RMB'000)	2,365,868	4,149,018	-42.98%
——Excluding the disposal gain of Shanghai Power shares	2,365,868	3,321,811	-28.78%
Basic EPS(RMB)	0.32	0.58	-44.83%
Proposed DPS(RMB)	0.16	0.232	-31.03%



Annual Results Highlights

Balance Sheet	31 Dec 2016	31 Dec 2015	Change
Total Assets (RMB Million)	91,187	86,243	+5.73%
Total Liabilities(RMB Million)	56,592	52,017	+8.80%
—long-term debts	31,416	32,461	-3.22%
—short-term debts	16,319	10,227	+59.57%
Total Equity(RMB Million) (including non-controlling interests)	34,595	34,226	+1.08%
Total Liabilities to Total Assets(%)	62.06	60.31	+1.75 ppts
Net Debt to Shareholder's Equity(%)	168.43	150.66	+17.77ppts
Net Debt to Total Equity(%)	132.75	120.26	+12.49ppts

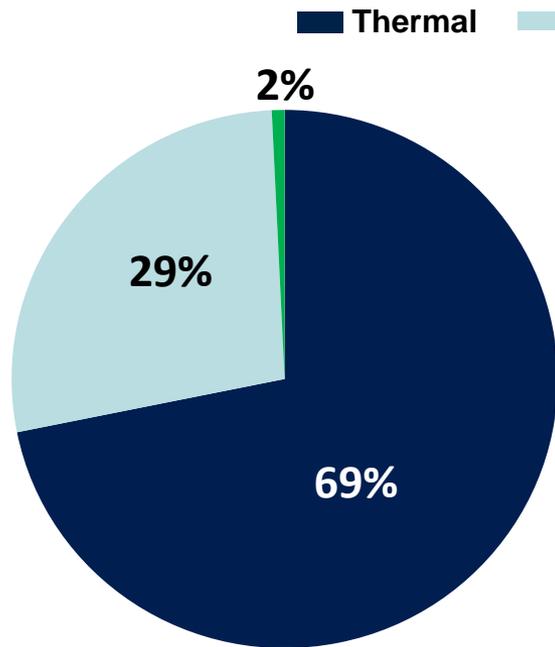


Section 2 Business Review



Revenue & Profit Structure

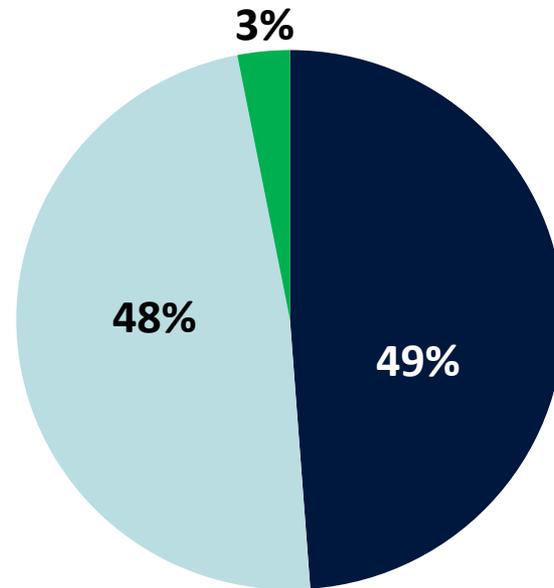
Revenue



RMB18,866
(Million RMB)

Profit Attributable to Owners of The Company

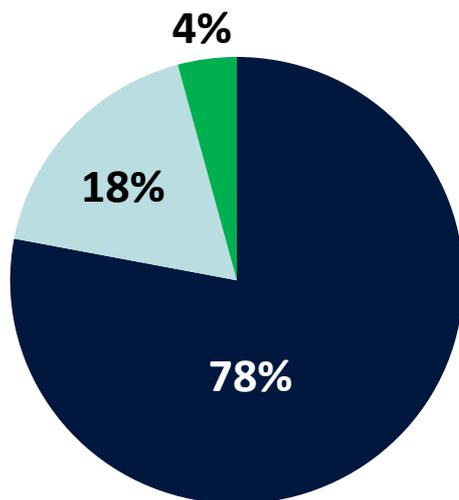
■ Thermal ■ Hydro ■ Non-hydro Renewable



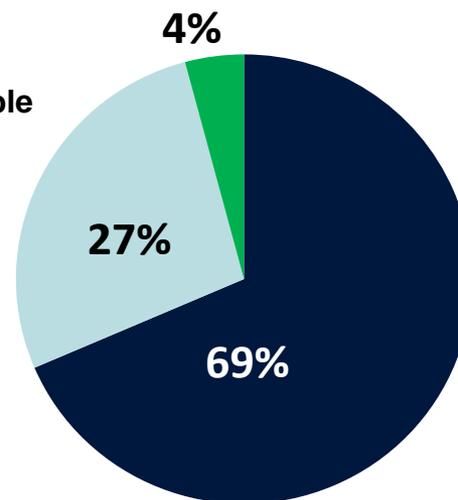
RMB 2,366
(Million RMB)

Attributable Capacity : 16,729MW

Consolidated Capacity : 17,525MW



■ Thermal
■ Hydro
■ Non-hydro Renewable

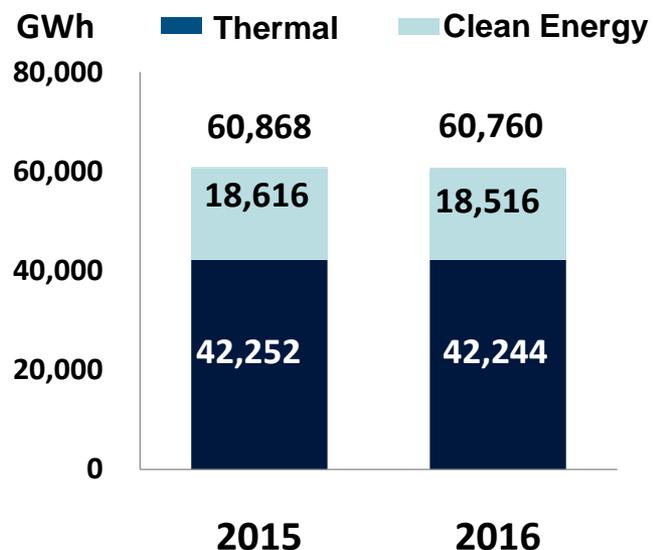


New Power Plants in 2016 (MW)

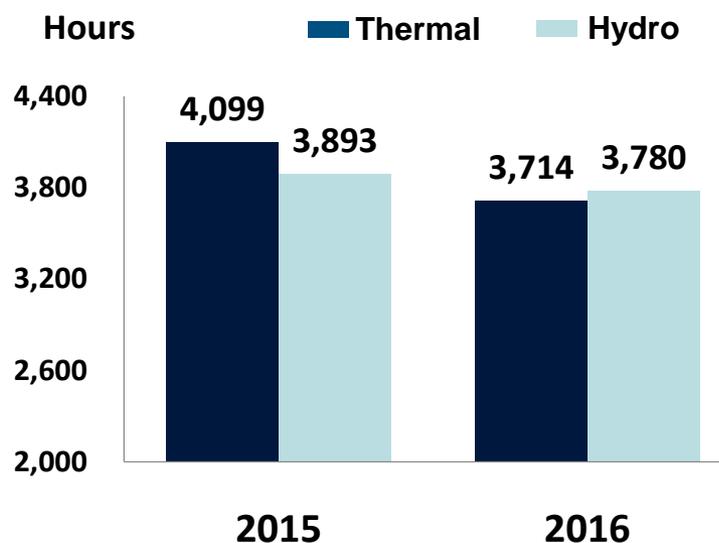
Shanshan(Phase II)	49.5	Wind	August	Tieling	25	Solar	July
Gulang	100	Wind	October	Tiemengang	50	Solar	August
Luoyang Yituo	6	Solar	March	CP Jiangmen	14	Solar	August
Jiaoganghu	40	Solar	Jan.—Aug.	Qinggil	20	Solar	August
Shuocheng District	50	Solar	May	New Barag Left Banner	10	Solar	August
Datong	100	Solar	June	Huangnitan	20	Solar	October

※ Other capacity changes came from Shanghai Power and Sichuan Energy Investment.

Net Power Generation



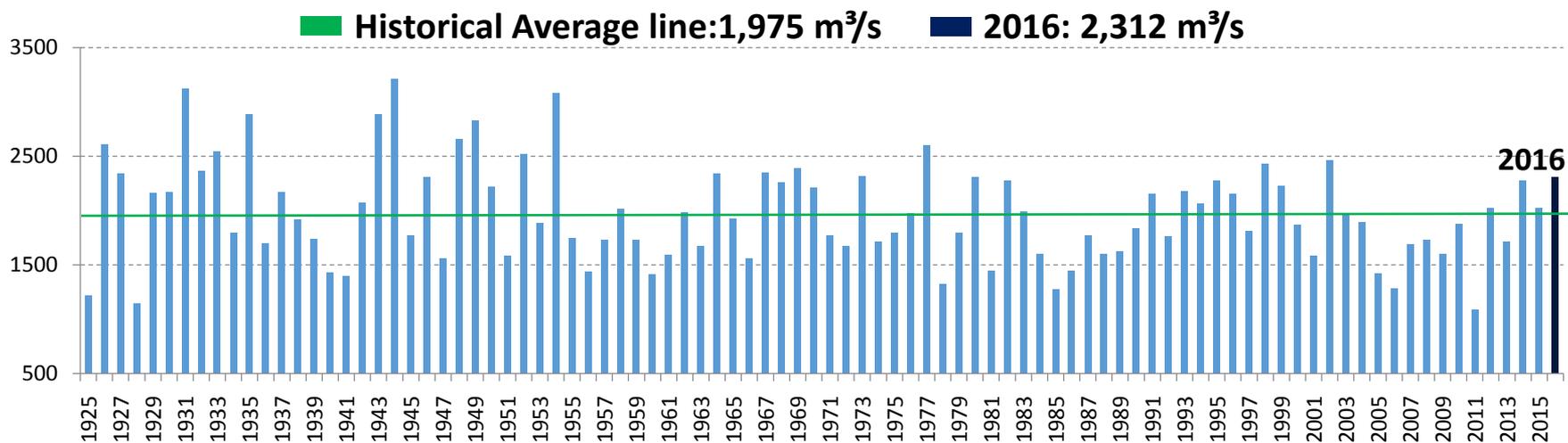
Average Utilization Hours



1. The power generation remained approximately the same due to additional power contribution from the newly-commissioned power plants.
2. Coal-fired utilisation hours decreased due to the nationwide power oversupply and the intense competition.
3. Hydro utilization hours decreased due to the uneven distribution of the rainfall in 2016.

Hydropower Output

Hydrologic Datas of Yuanjiang River at Wuqiangxi (1925-2016)



Hydropower Cascade Dispatching

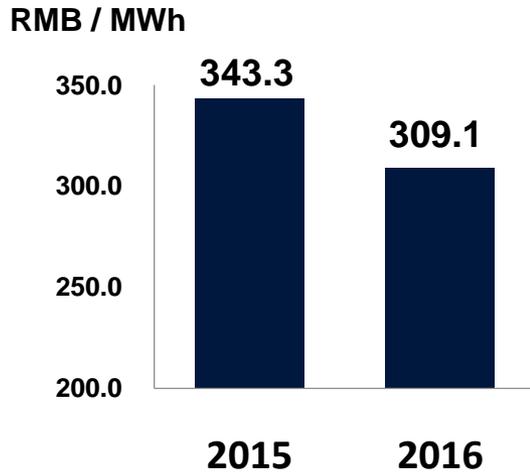


● Hydropower Plants on Yuanjiang river

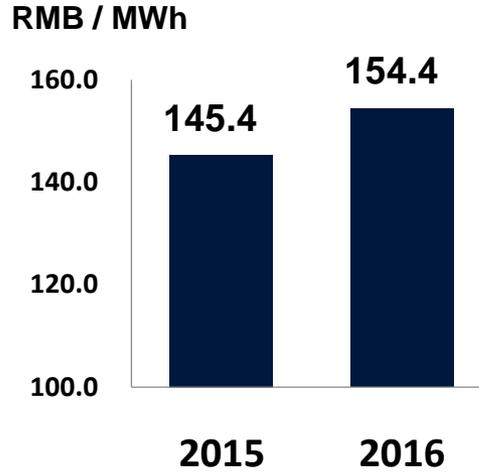
1. The rainfall in 2016 mainly concentrated in the first half of the year.
2. Take full advantage of the whole-river cascade dispatching management.
3. The utilization hours still remained a high level.

Tariffs and Unit Fuel Cost

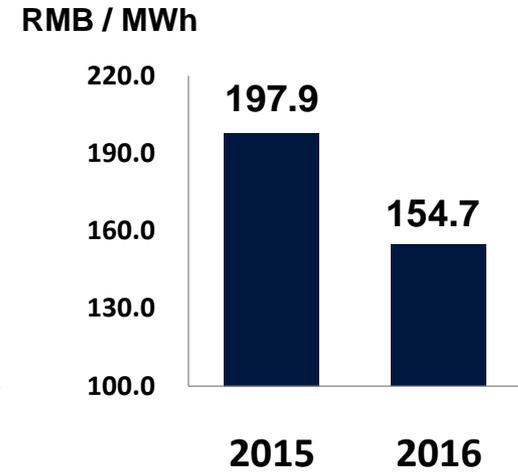
Thermal Realized Tariff



Unit Fuel Cost



Dark Spread

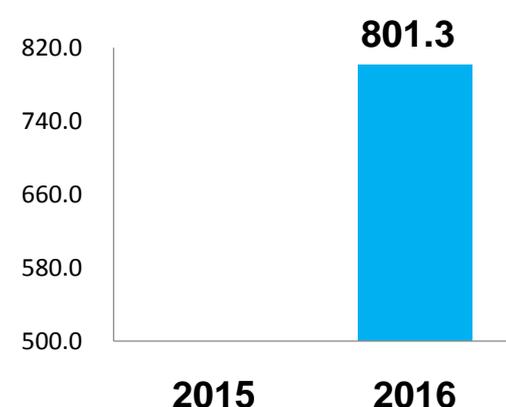
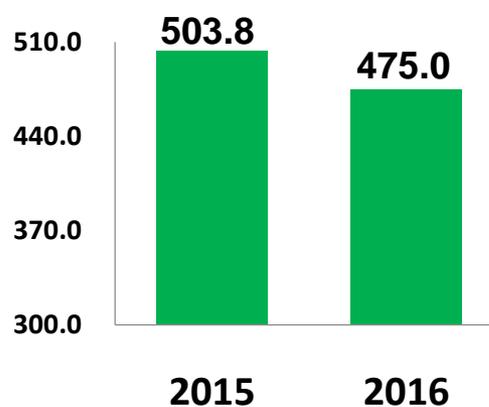
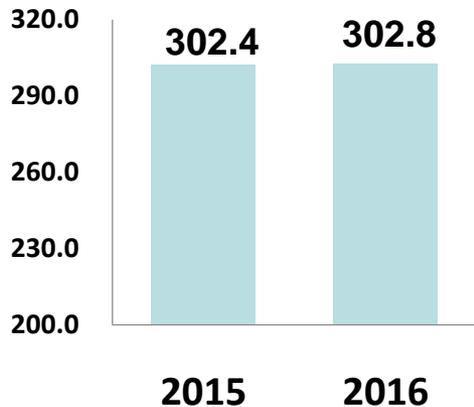


Clean Energy Realized Tariffs (RMB / MWh)

Hydro

Wind

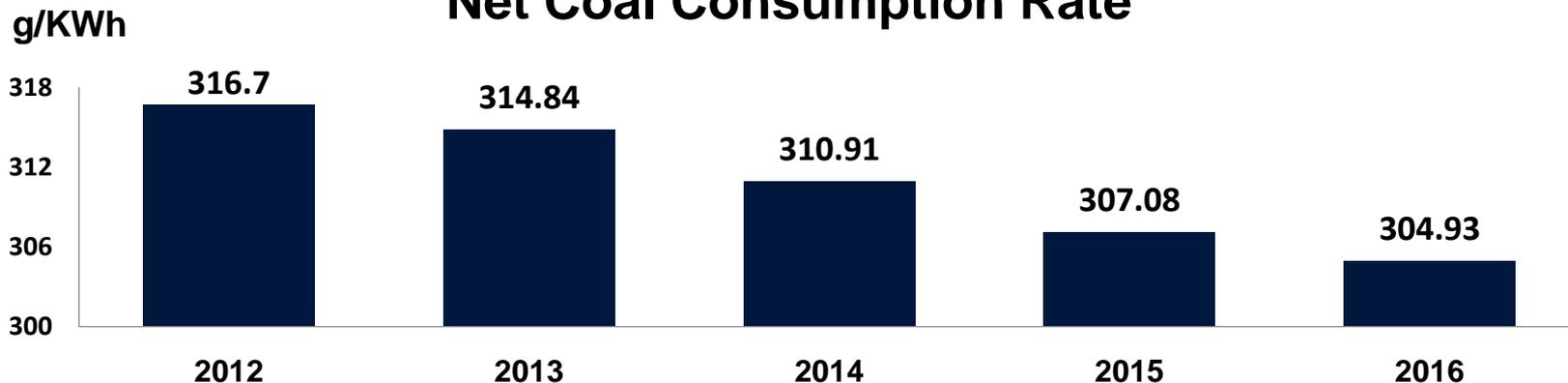
Solar



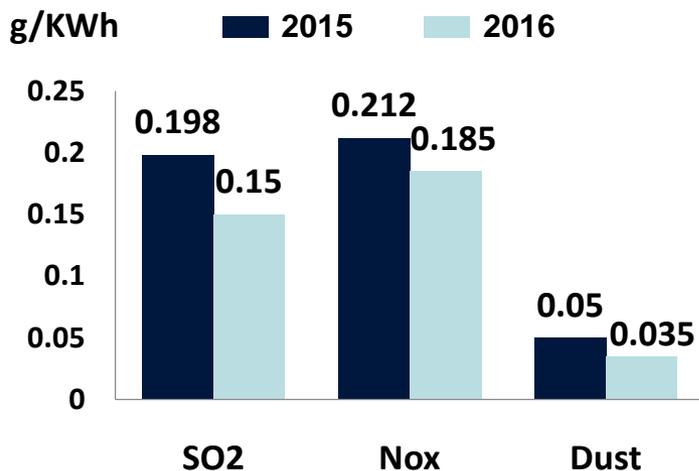


Energy Saving and Emission Reduction

Net Coal Consumption Rate



Pollutant Emissions Reduction (Thermal Units)



Ultra-low Emission Upgrade

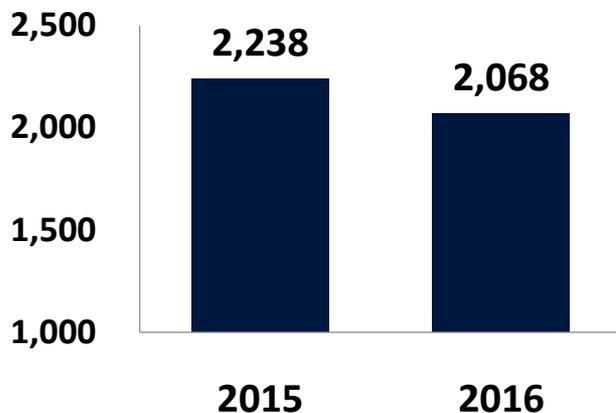
- 17 coal-fired units have completed ultra-low emission technical upgrade by the end of 2016.
- All operating coal-fired units will be completed by the end of 2017.

Year	Units	Total Capacity (MW)
2015	3	2,230
2016	14	8,320
Total	17	10,550

※ Including Changshu Power.

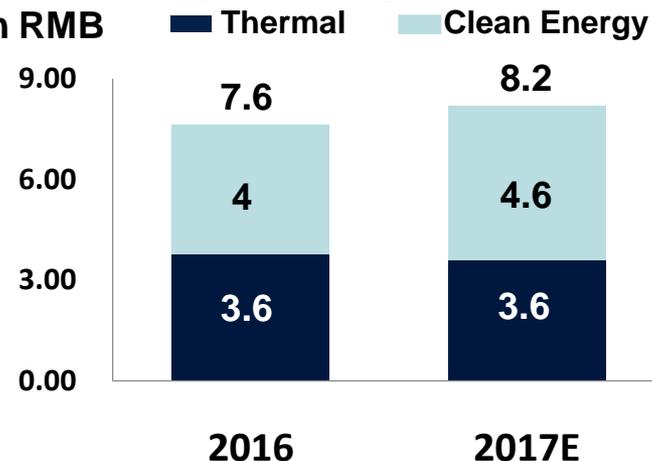
Finance Costs

Million RMB

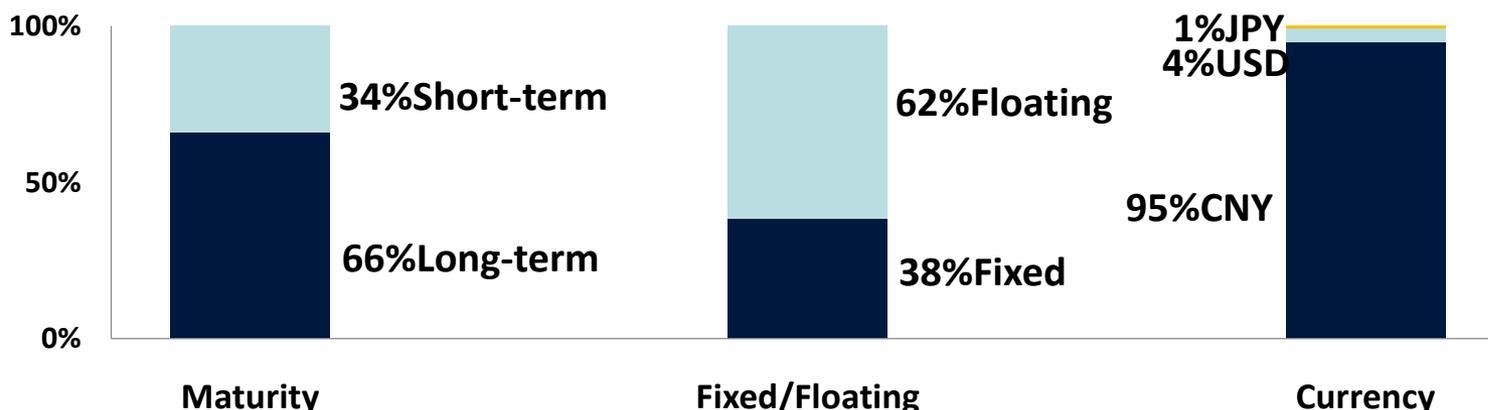


Capital Expenditure

Billion RMB



Debt Profile



※ All of the USD debts were from US Commercial Notes and the USD/RMB exchange rate had been locked by hedging.



Section 3 Future Development and Prospects



Strategies of The Company

(1) → Build up Cleaner Fuel Mix

- Enhance the proportion of renewables and take more green certificates.
- Accelerate ultra-low emission upgrade progress.
- Achieve low-carbon operation and prepare for national carbon market.

(2) → Adapt to Power Sector Reform

- Focus on energy service business and be close to end users.
- Participate in power distribution and retailing companies.
- Set up the power bidding institution to manage DPS and trading volume.

(3) → Promote Technology Innovation

- Promote the R&D of new technologies about energy storage, modern power grid networks, energy internet, and energy conservation.

(4) → Explore the Overseas Market

- Strengthen the ability in getting overseas businesses.



Clean Energy Pipeline Projects

- Hydropower capacity growth will mainly come from capacity expansion of existing plants. Wuqiangxi power plant will add 500MW capacity before 2019.
- Actively develop wind farms in low grid curtailment areas. New wind commissioning target of 250MW in 2017, mainly in Hunan.
- Actively participate in Top Runner and distributed solar programs, New Solar commissioning target of 400-500MW in 2017, including two Top Runner programs in Shanxi (80MW) and Shandong (100MW).
- Actively develop distributed gas-fired near the high-tech and industrial zones. The first batch of gas-fired power plants will start commissioning during 2018-2019.

Pipeline		
Type	Locations	2017-2020 Growth Expectation
Hydro	Mainly in Hunan	600MW+ in total
Wind & Solar	Low grid curtailment areas	500-1,000MW per year
Gas-fired	Guangdong, Sichuan and other areas	1,000MW+ in total

Thermal Pipeline Projects

- Cancel some coal-fired pipeline projects.
- Postpone construction of coal-fired plants.
- Control capex of coal-fired development.
- Select quality co-generation plants.

Pipeline		
Projects	Location	Expected Commissioning Year
Pu'an, 2×660MW	Guizhou	2018
Shangqiu(Co-gen), 2×350MW	Henan	2019
Dabieshan(New), 2×660MW	Hubei	Rescheduled
CP Shentou II, 2×1000MW	Shanxi	Rescheduled
Pingwei IV, Yaomeng(New)	Anhui,Henan	Cancelled



Energy Service Business

- Tap on the power distribution and retailing businesses.
- Participate in local energy service market .
- Develop CCHP distributed gas-fired programs.
- Establish market-oriented operating models.

Organic Attributable Capacity Growth





Appendices



Operating Highlights

	2016	2015	change
Attributable capacity (MW)	16,729	16,255	2.92%
Consolidated capacity (MW)	17,525	17,041	2.84%
—coal-fired	12,010	12,010	-
—Clean energy	5,515	5,031	0.10%
Gross generation (MWh)	63,403,445	63,531,141	-0.20%
—coal-fired	44,604,876	44,645,118	-0.09%
—clean energy	18,798,569	18,886,023	-0.46%
Average utilization hours			
—coal-fired	3,714	4,099	-9.39%
—hydro	3,780	3,893	-2.90%
Average realized tariffs (RMB/MWh)			
—coal-fired	309.08	343.33	-9.98%
—hydro	302.76	302.37	0.13%
Net coal consumption rate(g/KWh)	304.93	307.08	-0.70%



Income Statement

<i>(RMB '000)</i>	2016	2015	change
Turnover and other income	19,397,039	20,748,543	-6.51%
Fuel costs	(6,526,910)	(6,141,811)	6.27%
Other operating costs (net)	(7,519,551)	(6,744,943)	11.48%
Operating profit	5,350,578	7,861,789	-31.94%
Finance income	21,005	42,866	-51.00%
Finance costs	(2,067,966)	(2,238,296)	-7.61%
Share of profits of associates	540,353	740,551	-27.03%
Share of profits of joint ventrues	150,158	146,114	2.77%
Pre-tax profit	3,994,128	6,553,024	-39.05%
Taxation	(738,641)	(1,223,426)	-39.63%
Profit for the period	3,255,487	5,329,598	-38.92%
Profit attributable to equity holders	2,365,868	4,149,018	-42.98%
EPS (RMB)	0.32	0.58	-44.83%



Corporate Structure

■ SPIC is the only comprehensive energy corporation which owns nuclear, hydro, thermal, and other clean energy assets within China.

SPIC

55.61%

**China Power
(2380.HK)**

Power Assets

■ Total conventional energy of SPIC including:

1. Hydro	21.6 GW
2. Wind	12 GW
3. Solar	7.1 GW
4. Thermal	71.4 GW

50-100%

10 coal-fired power plants

Total Installed capacity:
15,930 MW

63%

Wuling Power

40-100%

Total Installed capacity:
Hydro: 4,782 MW;
Wind : 398 MW;
Solar: 30 MW;
Coal-fired: 600 MW.

16.98%

**SEP
(600021.SH)**

Attributable capacity:
9,642 MW

50-100%

Solar Farms

Total installed capacity:
315 MW

Thermal Power Plants Distribution

- Existing Plants Located
- Plants under construction
- SEP



Plants	Capacity(MW)	Equity	Locations
In Operation			
Pingwei:	2×630	100%	Anhui
Pingwei II :	2×640	75%	Anhui
Pingwei III :	2×1,000	60%	Anhui
Yaomeng :	3×300+1×310+2×630	100%	Henan
Dabieshan:	2×640	51%	Hubei
Fuxi:	2×600	51%	Sichuan
CP Shentou:	2×600	80%	Shanxi
Wuhu:	2×660	100%	Anhui
Changshu:	2×1,000+4×330	50%	Jiangsu
Xintang(co-gen):	2×300	50%	Guangdong
Liyujiang:	2×300	25%	Hunan
Under Construction			
Pu'an :	2×660	100%	Guizhou
Pre-Construction			
Shangqiu(co-gen) :	2×350	100%	Henan
Dabieshan (New):	2×660	51%	Hubei
CP Shentou II :	2×1,000	100%	Shanxi
Shanghai Electric Power			
● SEP:	9,642	16.98%	East China

Hydropower Plants Distribution

- Existing Plants Located
- Plants under construction



Plants	Capacity(MW)	Equity	Locations
In Operation			
Wuqiangxi:	1,200	63%	Hunan
Sanbanxi:	1,000	63%	Guizhou
Tuokou:	830	59.9%	Hunan
Baishi:	420	59.9%	Guizhou
Lingjintan:	270	63%	Hunan
Hongjiang:	270	59.9%	Hunan
Wanmipo:	240	63%	Hunan
Guazhi:	150	59.9%	Guizhou
Others:	402	91-100%	Hunan/Sichuan
Under Construction			
Jiesigou:	24	44.1%	Sichuan
Luoshuidong:	35	63%	Hunan
Mawo:	32	63%	Hunan

Non-hydro Renewable Energies Distribution

- Existing Wind and Solar Farms Located
- Wind and Solar farms under construction



Plants	Capacity(MW)	Equity	Locations
Wind Farms in Operation			
Tuokexun:	49.5	63%	Xinjiang
Buerjin:	49.5	63%	Xinjiang
Shanshan :	99	63%	Xinjiang
Yaoposhan:	50	63%	Hunan
Donggangling:	50	63%	Hunan
Gulang:	100	63%	Gansu
Solar Farms in Operation			
Solar Farms:	335	44.1-100%	
Wind and Solar Farms Under Construction ●			
Wind Farms:	539.9	32.1-63%	
Solar Farms:	30	44.1-63%	



China Power International Development Limited

Thank you!

