



中國電力國際發展有限公司

CHINA POWER INTERNATIONAL DEVELOPMENT LIMITED

China Power International Development Limited

2017 Annual Results Presentation

23 March 2018

2380.HK





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



Section 1 Annual Results Highlights



Annual Results Highlights

Income Statement	2017	2016	Change
Revenue (RMB 000's)	19,966,811	18,866,153	+5.83%
Fuel costs(RMB 000's)	(9,549,980)	(6,526,910)	+46.32%
Operating Profit (RMB 000's)	3,108,454	5,350,578	-41.90%
Profit Attributable to Owners of the Company (RMB 000's)	795,272	2,365,868	-66.39%
Basic EPS(RMB)	0.10	0.30 (restated)	-66.67%
Proposed DPS(RMB)	0.081	0.16	-49.38%



Annual Results Highlights

Balance Sheet	31 Dec 2017	31 Dec 2016	Change
Total Assets (RMB Millions)	98,027	91,187	+7.50%
Total Liabilities(RMB Millions)	60,832	56,592	+7.49%
——long-term debts	29,612	31,416	-5.74%
——short-term debts	22,028	16,319	+34.98%
Total Equity(RMB Millions) (including non-controlling interests)	37,194	34,595	+7.51%
Total Liabilities to Total Assets(%)	62.06	62.06	-
Net Debt to Shareholder's Equity(%)	157.92	168.43	-10.51ppts
Net Debt to Total Equity(%)	126.53	132.75	-6.22ppts

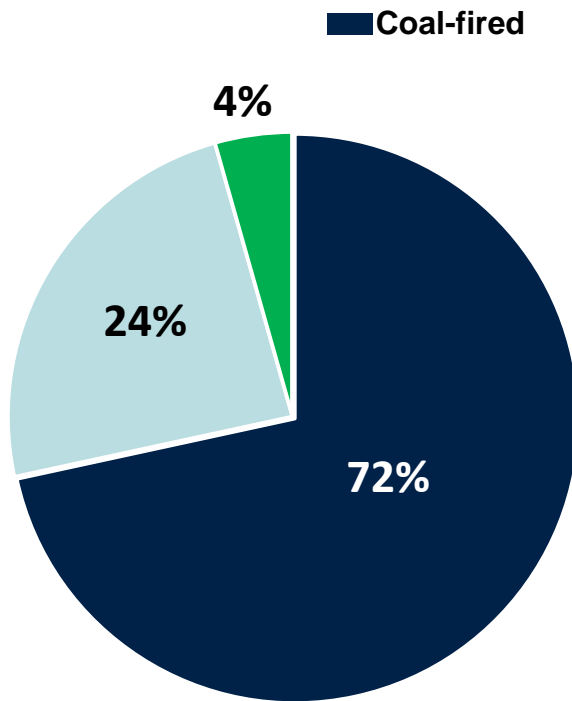


Section 2 Business Review



Revenue & Profit Structure

Revenue

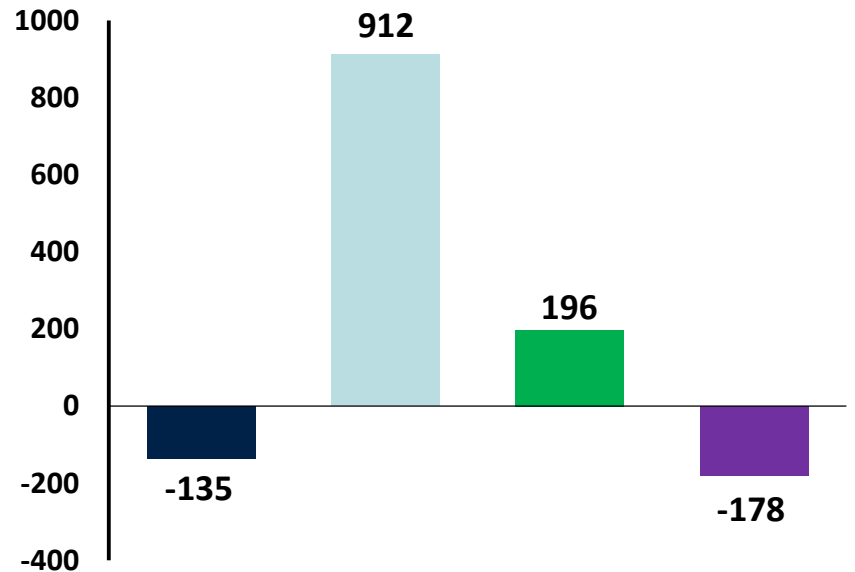


19,966,811
(RMB 000's)

Profit Attributable to Owners of The Company

■ Coal-fired ■ Hydro ■ Wind & Solar ■ Unallocated

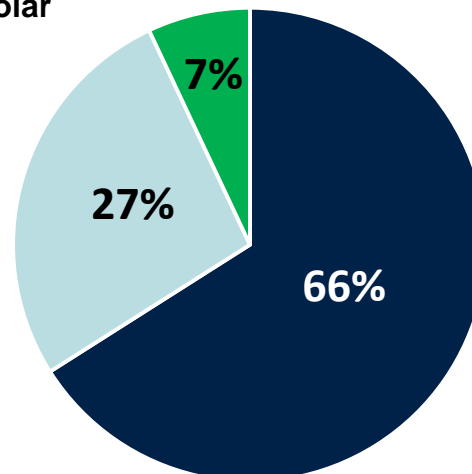
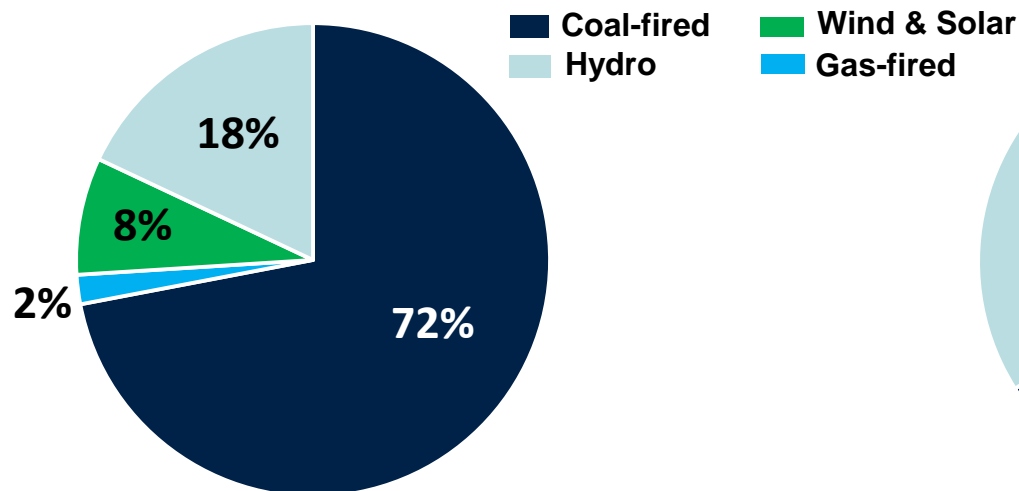
Millions RMB



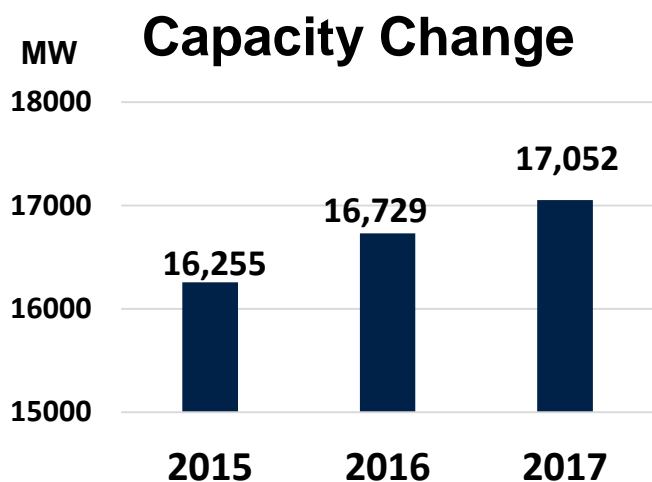
795,272
(RMB 000's)

Attributable Capacity : 17,052MW

Consolidated Capacity : 17,840MW



※ All the gas-fired power capacity are attributable to Shanghai Power

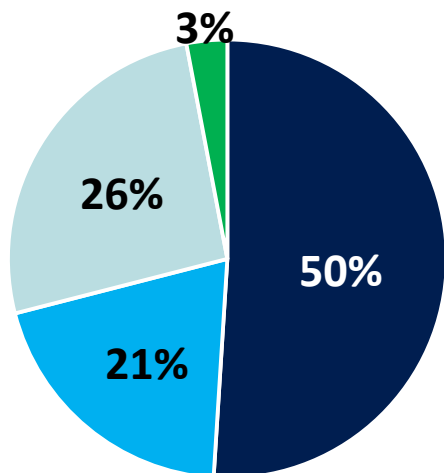


Newly Commissioned in 2017		
Type	Capacity(MW)	Locations
Hydro	24	Sichuan
Wind	149.5	Hunan
Solar	496 (Including Fushan)	Hunan,Anhui,Sichuan
Total	669.5	---
Shutdown of Coal-fired in 2017		
Coal-fired	310	Henan

※ Other changes came from Shanghai Power

Net Power Generation

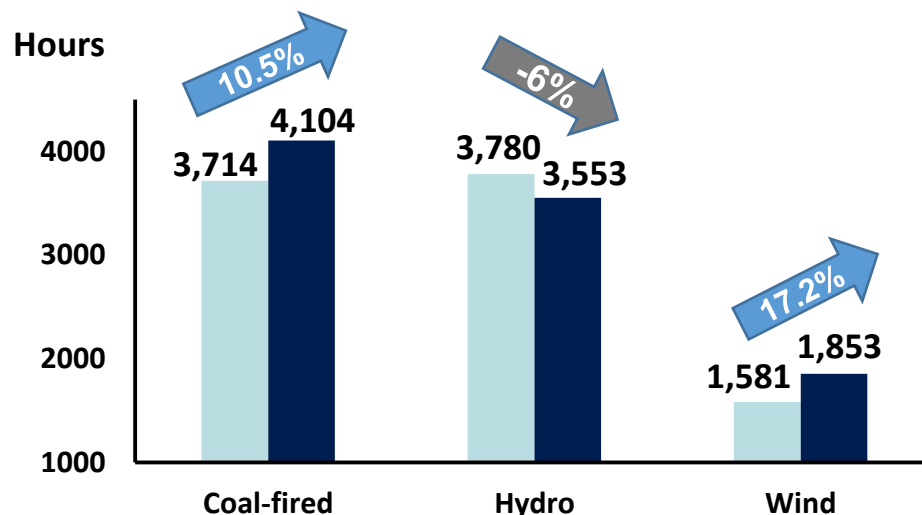
■ Coal-fired — Planned Volume
■ Coal-fired — Direct Power Supply Volume
■ Wind & Solar ■ Hydro



2017 Total : 64,054 GWh

Average Utilization Hours

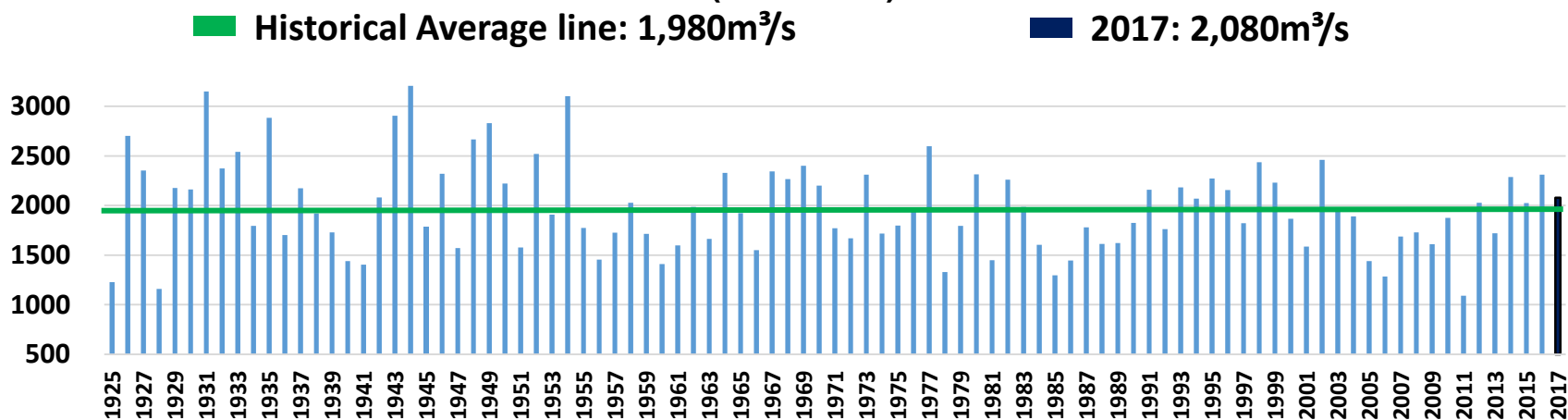
■ 2016 ■ 2017



1. The hydropower utilization hours dropped yoy in 2017 due to less water flow.
2. The coal-fired power utilization hours rebounded significantly due to the Group's proactive efforts in power marketing.
3. The wind power utilization hours were up 17.2% mainly due to lower curtailment in Northwest China.

Hydropower Output

Water Flow data of Yuanjiang River at Wuqiangxi Power Plant (1925-2017)



Hydropower Cascade Dispatching



● Hydropower Plants on Yuanjiang river

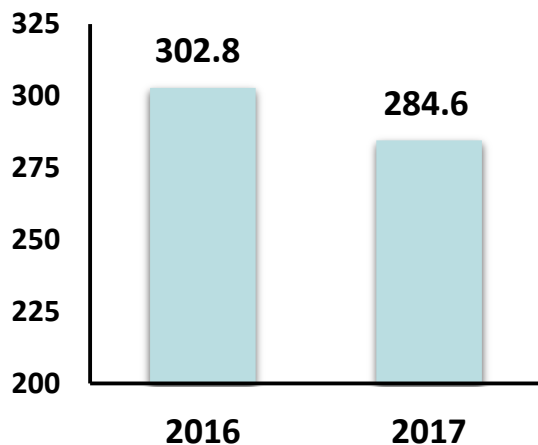
1. The water flow level in 2017 was slightly higher than historical average.
2. Take full advantage of the whole-river cascade dispatching management.
3. To remain at the average level.

Tariffs and Unit Fuel Cost

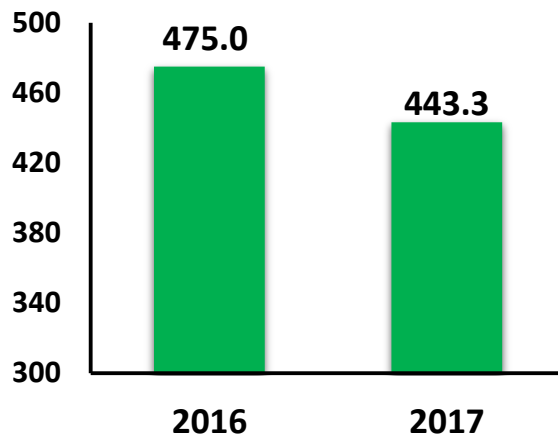
Clean Energy Realized Tariffs (Excluding VAT)

Hydro Wind Solar

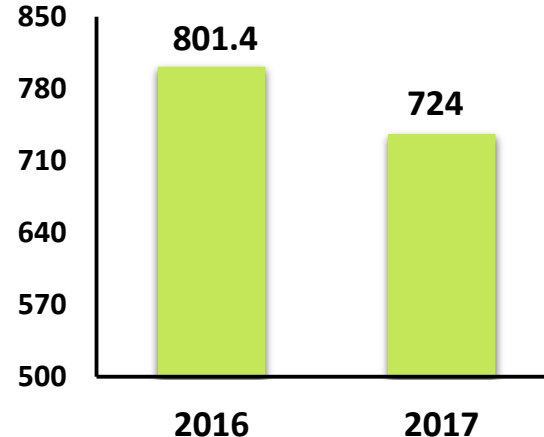
RMB / MWh



RMB / MWh

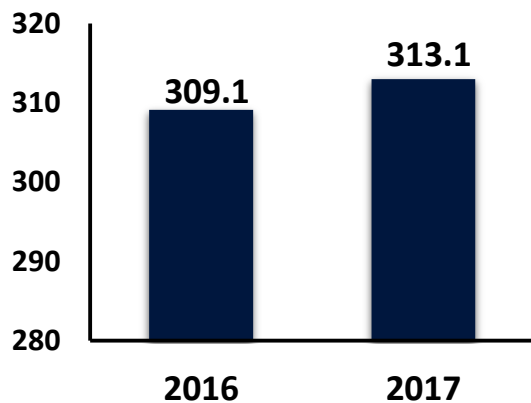


RMB / MWh



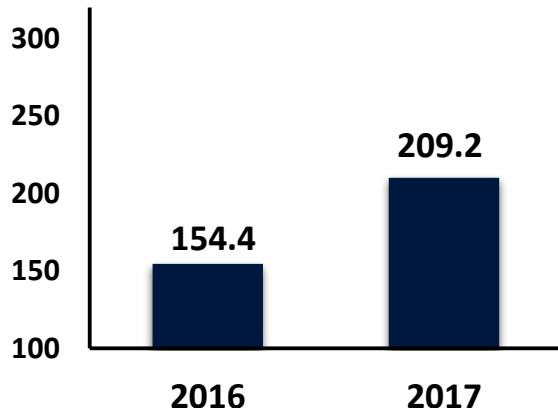
Coal-fired Realized Tariff

RMB / MWh (Excluding VAT)



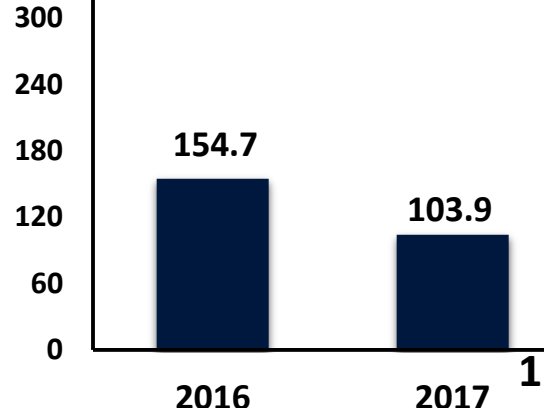
Unit Fuel Cost

RMB / MWh



Dark Spread

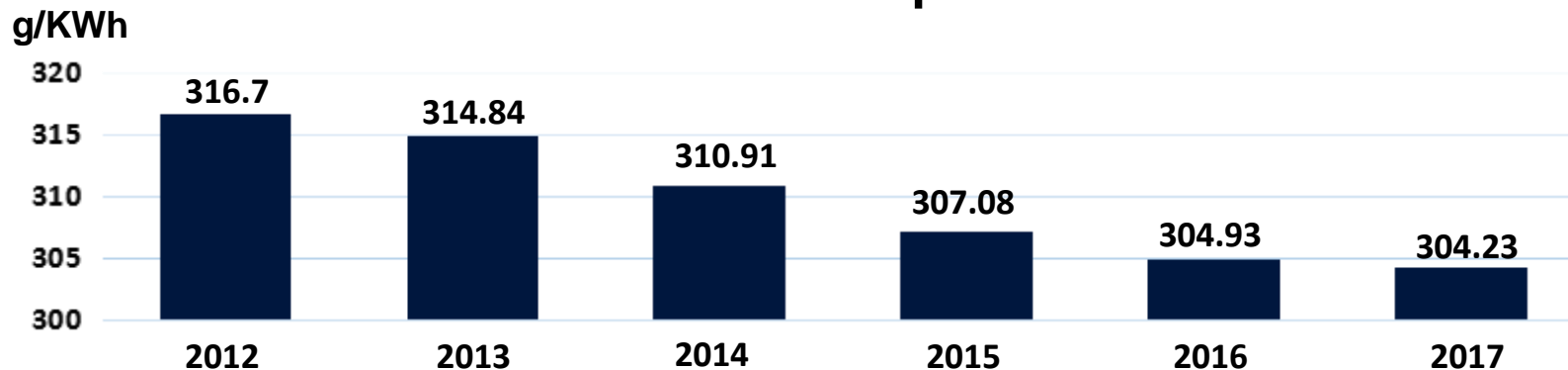
RMB / MWh



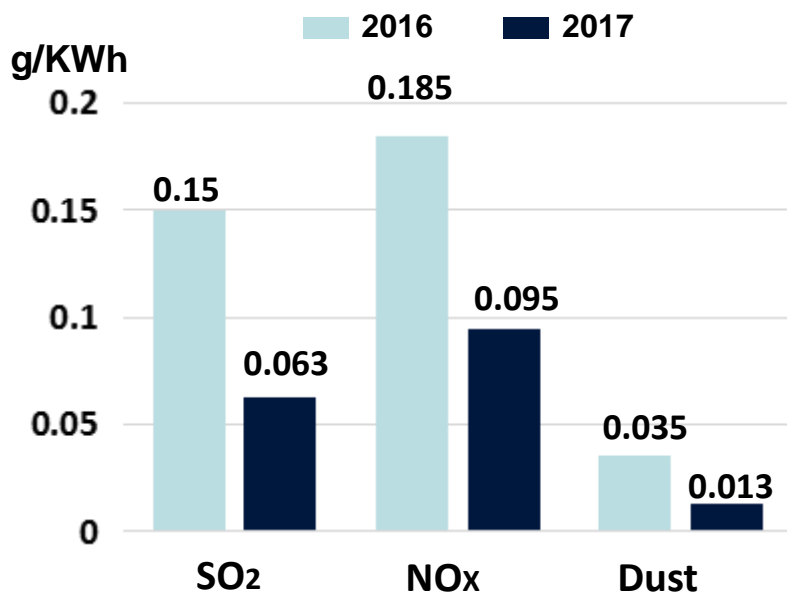


Energy Saving and Emission Reduction

Net Coal Consumption Rate



Pollutant Emissions Reduction (Coal-fired Units)



Ultra-low Emission Upgrade

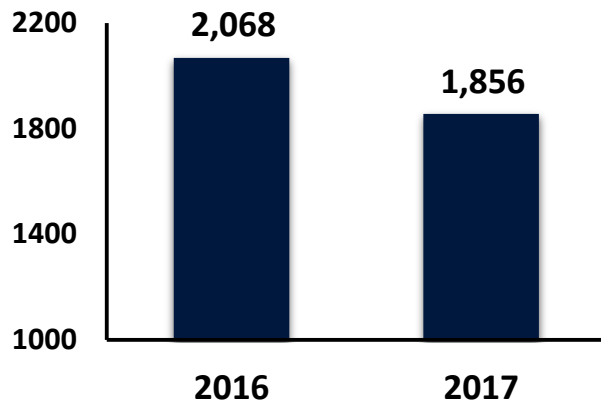
➤ All coal-fired units (25 in total) had completed ultra-low emission technical upgrade by the end of 2017 (Among which :23 units have gotten ultra-low emission tariffs).

Year	Units	Total Capacity (MW)
2015	3	2,230
2016	14	8,320
2017	8	4,470
Total	25	15,020

※ Including Changshu Power.

Finance Costs

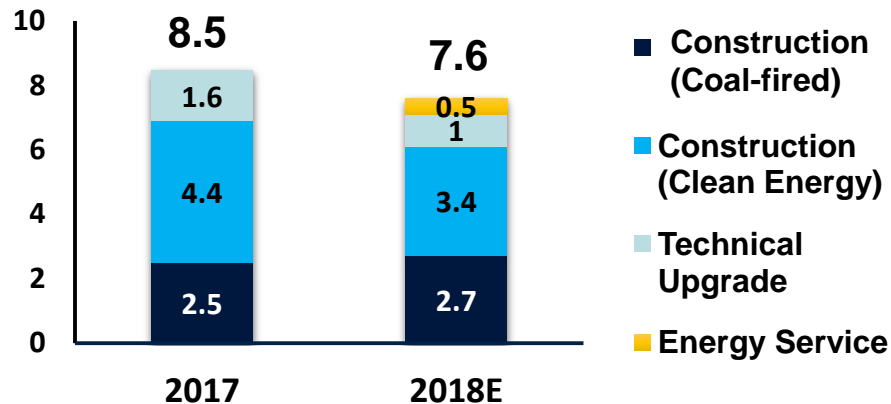
Millions RMB



Capital Expenditure

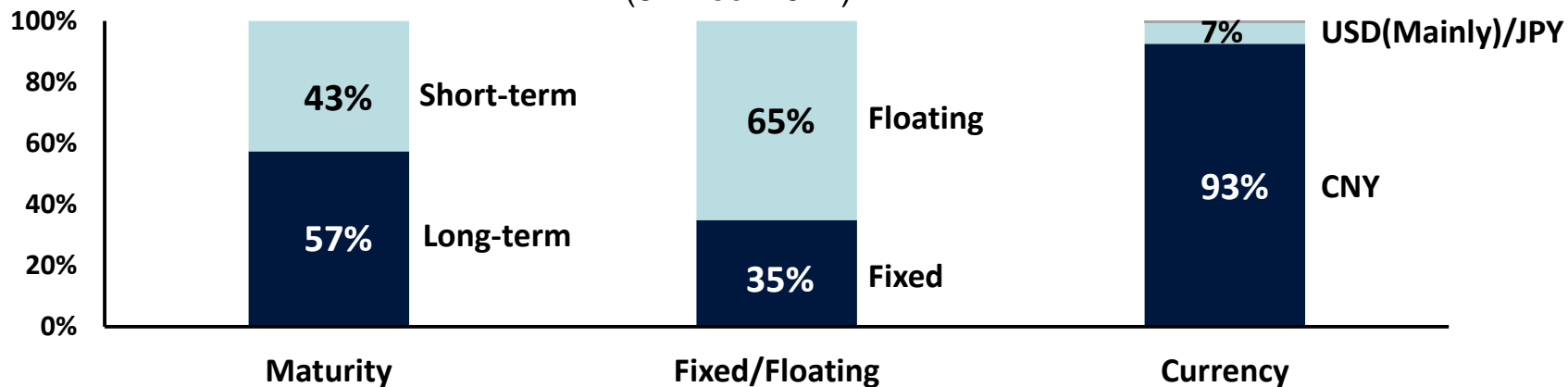
(Excluding Newly Acquired Companies)

Billions RMB



Debt Profile

(31 Dec. 2017)



※ The USD debts were from USD loans.



Section 3 Future Development and Prospects



Clean Energy Mix up to 50%+ by 2020

PATH 1: Assets Injection - strong support from parent company



Acquired Companies	2018E Total Installed Capacity (MW)		
	Hydro	Gas-fired	Wind & Solar
Guangxi	630	-	720
Guangdong	-	780	100
Sihui	-	800	-
Shandong	-	-	240
Hubei	-	-	300
Anhui	-	-	270
Total	630	1580	1630

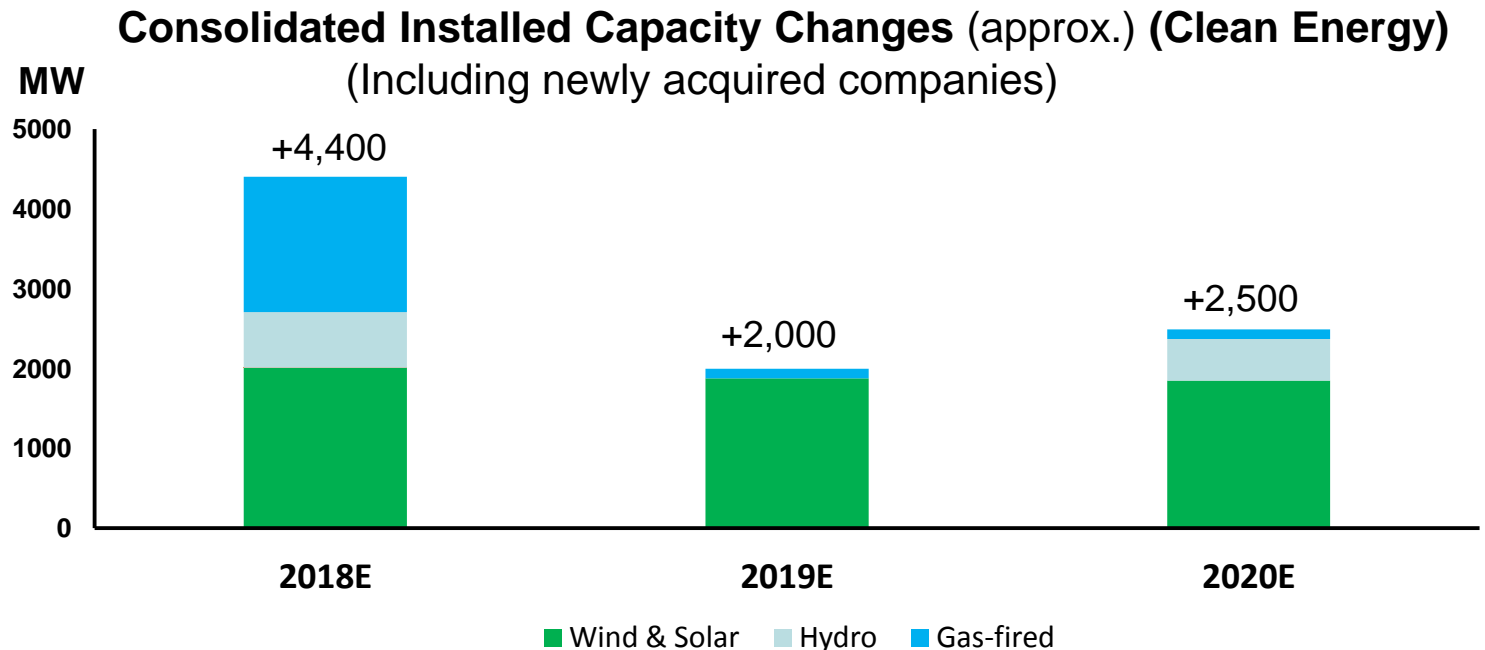
- Accelerate the transition to a clean energy company.
- Enlarge operational capacity with expansion potential.
- Improve profitability.
- Strengthen presence in the high growth regional markets.



Clean Energy Mix up to 50%+ by 2020

PATH 2: Construction - focus on hydropower, solar & wind power

- Hydropower capacity growth will mainly come from capacity expansion of existing plants.
- Develop solar & wind farms, especially to break through in off-shore wind power business .
- Investment hurdle rates for new solar/wind power are no less than 13%/12% equity IRR.

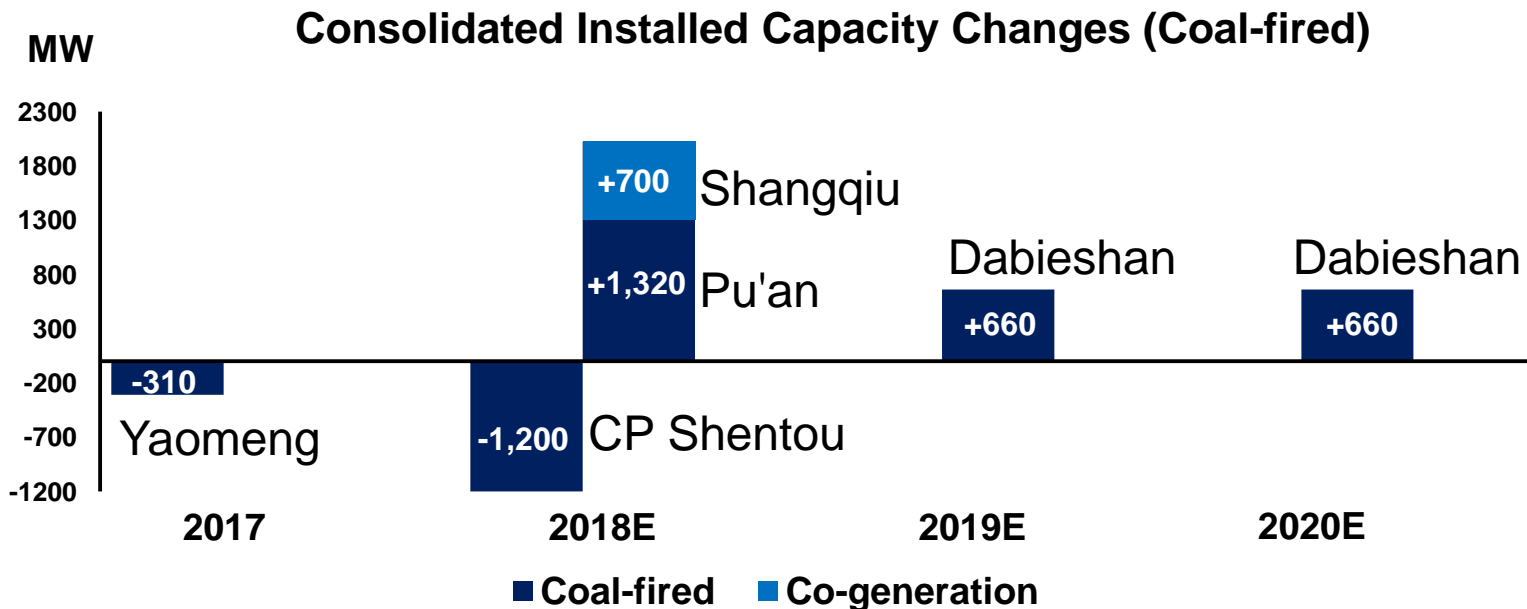




Clean Energy Mix up to 50%+ by 2020

PATH 3: Control the development of coal-fired power

- Reduce stakes in or transfer the ownership of some coal-fired plants (such as the disposal of CP Shentou).
- Shut down outdated coal-fired power units (such as the shutdown of Yaomeng #1 unit).
- Postpone construction of some new coal-fired plants (such as Pu'an & Dabieshan)..
- Control capex of coal-fired development.





Reform and Breakthrough

(1) → 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 Direct Power Supply.

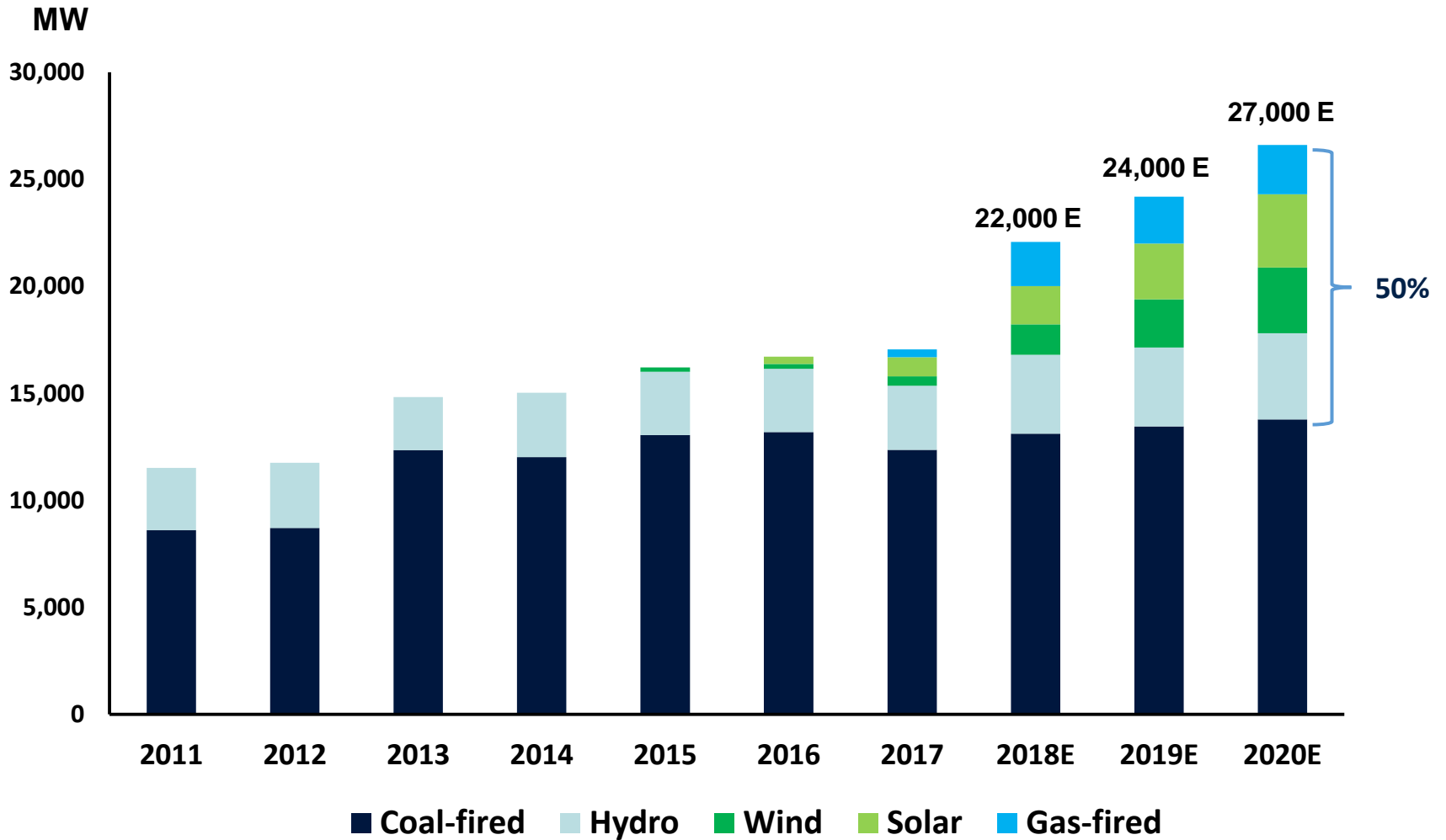
(2) → New Technologies

- Promote the R&D of new technologies on energy storage, modern power grid networks, energy internet, and energy conservation.
- Cooperate with Tsinghua University and Huawei Company.

(3) → Institutional Innovation

- Market-oriented operating models.
- Effective talents incentive mechanism.

Attributable Capacity Growth





Financial Statements and Appendices



Operating Highlights

	<u>2017</u>	<u>2016</u>	<u>change</u>
Attributable capacity (MW)	17,052	16,729	1.93%
Consolidated capacity (MW)	17,840	17,525	1.80%
——coal-fired	11,700	12,010	-2.58%
——Clean energy	6,140	5,515	11.33%
Gross generation (MWh)	66,683,402	63,403,445	5.17%
——coal-fired	48,021,260	44,604,876	7.66%
——clean energy	18,662,142	18,798,569	-0.73%
Average utilization hours			
——coal-fired	4,104	3,714	10.50%
——hydro	3,553	3,780	-6.01%
Average realized tariffs (RMB/MWh)			
——coal-fired	313.14	309.08	1.31%
——hydro	284.62	302.76	-5.99%
Net coal consumption rate(g/KWh)	304.23	304.93	-0.23%



Income Statement

<i>(RMB '000)</i>	<u>2017</u>	<u>2016</u>	<u>change</u>
Revenue & Other income	20,332,418	19,397,039	4.82%
Fuel costs	(9,549,980)	(6,526,910)	46.32%
Other operating costs (net)	(7,673,984)	(7,519,551)	2.05%
Operating profit	3,108,454	5,350,578	-41.90%
Finance income	40,413	21,005	92.40%
Finance costs	(1,855,603)	(2,067,966)	-10.27%
Share of profits of associates	222,630	540,353	-58.80%
Share of profits of joint ventrues	44,743	150,158	-70.20%
Pre-tax profit	1,560,637	3,994,128	-60.93%
Taxation	(279,930)	(738,641)	-62.10%
Profit for the period	1,280,707	3,255,487	-60.66%
Profit attributable to equity holders	795,272	2,365,868	-66.39%
<i>EPS (RMB)</i>	0.10	0.30(restated)	-66.67%

Corporate Structure

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

SPIC

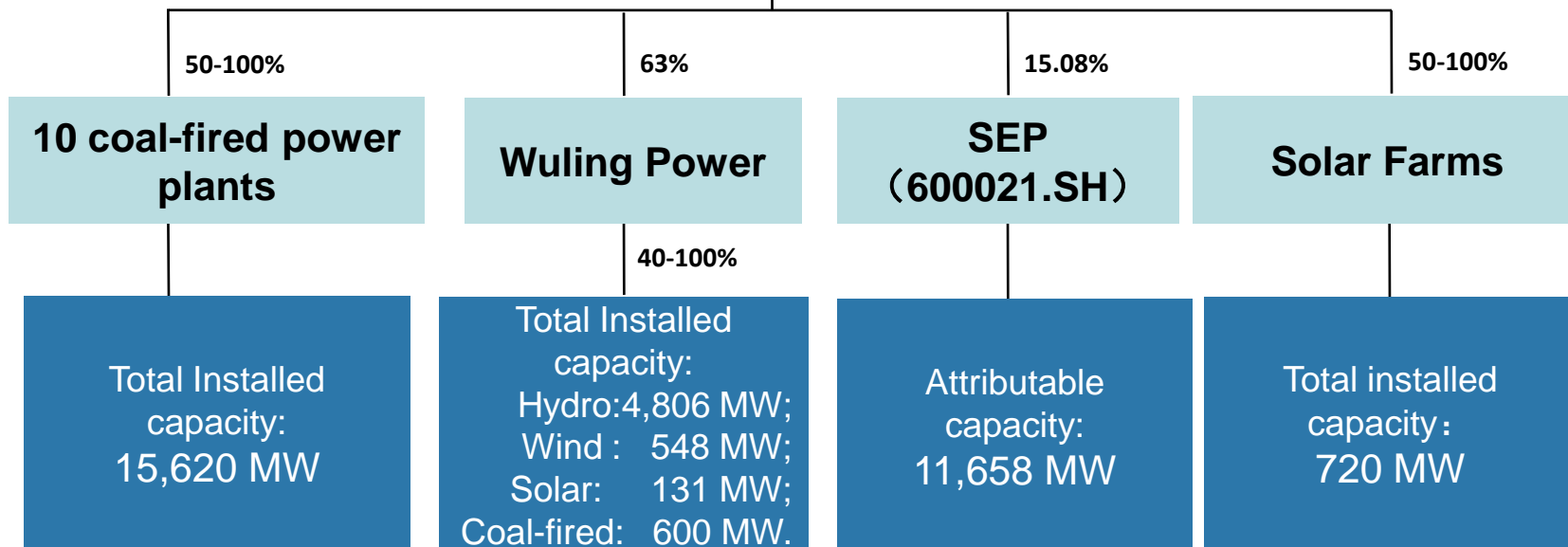
55.61%

**China Power
(2380.HK)**

Power Assets

■ Total conventional energy of SPIC includes:

1. Hydro	22.0 GW
2. Wind	13.7 GW
3. Solar	11.7 GW
4. Thermal	74.2 GW



Note: The Company holds 12.17% stakes in Sichuan Energy Investment.



Thermal Power Plants Distribution

- Existing Plant Locations
- 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+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	95%	Guizhou
Shangqiu(co-gen) :	2×350	100%	Henan
Dabieshan (New):	2×660	51%	Hubei
Shanghai Electric Power			
● SEP:	11,658	15.08%	East China

Hydropower Plants Distribution

- Existing Plant Locations
- 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:	426	91-100%	Hunan/Sichuan
Under Construction			
Luoshuidong:	35	63%	Hunan
Mawo:	32	63%	Hunan
Wuqiangxi	500	63%	Hunan

Non-hydro Renewable Energies Distribution

Existing Wind and Solar Farms Locations

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	44.1%	Gansu
Daqingshan	50	63%	Hunan
Longshan	50	63%	Hunan
Xinping	49.5	32.1%	Yunnan
Solar Farms in Operation			
Solar Farms:	851	44.1-100%	
Wind and Solar Farms Under Construction			
Wind Farms:	490.4	44.1-63%	
Solar Farms:	40	44.1-100%	



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Thank you!

