

# CLP Holdings 2017 Annual Results Analyst Briefing

26 February 2018

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# Agenda



## Performance Overview



## Group Financial Performance



## Performance by Business Units



## Outlook



## Questions and Answers



## Appendices

# Performance Overview

The Premiere of A Century of Power



# Operating Earnings up 8% as diversified portfolio delivers steady growth

- ✓ Our Focus • Delivery • Growth strategy and diversified portfolio continue to deliver steady growth and position CLP to navigate the energy transition
- ✓ Solid portfolio performance and operational delivery
- ✓ New SoC lays strong foundation for future investment in Hong Kong
- ✓ Energy transition affected thermal generation in Mainland China
- ✓ Positive momentum for value restoration in Australia progressing ahead of schedule
- ✓ Dividend growth and robust financial structure

# Earnings growth, strong financial structure and investment for the future

## Operating Earnings

HK\$13,307 m    +8%    ↑

## Operating Earnings Per Share

HK\$5.27    +8%    ↑

## Fourth Interim Dividend

HK\$1.14    +5%    ↑

## Total Interim Dividends

HK\$2.91    +4%    ↑

## Total Earnings

HK\$14,249 m    +12%    ↑

## Total Earnings Per Share

HK\$5.64    +12%    ↑

## Credit Ratings

	S&P	Moody's
CLP Holdings	A	A2
CLP Power	A+	A1
CAPCO #	AA-	A1
EnergyAustralia	BBB+	-

## Capital Investment

SoC Capex

HK\$7.6 bn

Others (incl. acquisitions)

HK\$7.7 bn

All Outlooks are currently Stable. # First time ratings obtained in June 2017



# Operating Performance

## Safety

Total recordable injury rate

0.29

+0.13 ●

## Generation Performance

Electricity sent out <sup>(1)</sup>

83.9 TWh

+5.4% ●

## Customer Accounts

Hong Kong 2.556 m +1.3% ●

Australia 2.623 m Stable ●

## Generation Capacity <sup>(2)</sup>

In operation 23.5 GW +0.6 ●

Non-carbon Emitting <sup>(3)</sup> 5.2 GW +0.6 ●

Committed/In construction 1.1 GW +0.2 ●

## Reliability in Hong Kong <sup>(4)</sup>

Average minutes lost pa

1.57

+0.09 ●

## Emissions <sup>(2)</sup>

Average CO<sub>2</sub> Emission Intensity

0.69 kg CO<sub>2</sub> /kWh

-0.03 ●

● Favourable ● Stable/Satisfactory ● Unfavourable

(1) Equity basis and capacity purchase arrangements. Also includes long-term power contracts from facilities in which we hold an equity interest

(2) Equity basis and capacity purchase arrangements

(3) Non-carbon emitting includes wind, hydro, solar and nuclear

(4) Unplanned customer minutes lost - average of the past 36 months. The increase in 2017 was mainly due to the impact of Severe Typhoon Hato








# Group Financial Performance

Cable Tunnel, Hong Kong





# Solid financial performance with strength from diversity

HK\$M	2017	2016 <sup>^</sup>	Change
<b><u>Revenue</u></b>	<b>92,073</b>	<b>79,434</b>	 <b>16%</b>
<b><u>Operating Earnings</u></b>			
<b>Hong Kong electricity and related activities</b>	<b>9,198</b>	<b>8,843 <sup>^</sup></b>	 <b>4%</b>
Local electricity business	8,863	8,640	
Sales to Guangdong	65	56 <sup>^</sup>	
PSDC and Hong Kong Branch Line	270	147	
<b>Outside Hong Kong</b>	<b>4,783</b>	<b>4,113</b>	 <b>16%</b>
Mainland China	1,238	1,521	
India	647	469	
Southeast Asia and Taiwan	160	274	
Australia	2,738	1,849	
<b>Other earnings and unallocated items</b>	<b>(674)</b>	<b>(622) <sup>^</sup></b>	
<b><u>Operating Earnings</u></b>	<b>13,307</b>	<b>12,334</b>	 <b>8%</b>
Items affecting comparability <sup>#</sup>	942	377	
<b><u>Total Earnings</u></b>	<b>14,249</b>	<b>12,711</b>	 <b>12%</b>

<sup>#</sup> Items affecting comparability in 2017 primarily include revaluation gains on investment properties and reversal of tax provision for acquired derivatives at EnergyAustralia. 2016 mainly represented sales of an asset and impairment of Fangchenggang.

<sup>^</sup> Comparative numbers have been restated for a change of presentation of other earnings from Hong Kong business to other earnings and unallocated items

# Adjusted Current Operating Income (ACOI)

HK\$M	2017	2016	Change
<b>Operating Earnings</b> (Attributable to CLP)	<b>13,307</b>	<b>12,334</b>	 8%
Exclude:			
Fair value adjustments	(138)	341	
Net finance costs #	(2,278)	(2,371)	
Income tax expense	(3,353)	(2,914)	
Non-controlling interests	(849)	(850)	
<b>ACOI</b>	<b>19,925</b>	<b>18,128</b>	 10%

# Included the distribution to perpetual capital securities holders

## Adjusted Current Operating Income or ACOI

- ACOI equals EBIT excluding items affecting comparability and fair value adjustments, and includes Group's share in net earnings from joint ventures and associates

### Fair value adjustments

- Predominantly energy derivative contracts in EnergyAustralia reflecting a significant increase in wholesale prices (2017: Loss of HK\$182m, before tax)

### Net finance costs #

- Lower finance costs as continued efforts to reduce costs more than offset a modest increase in borrowings

### Income tax expense

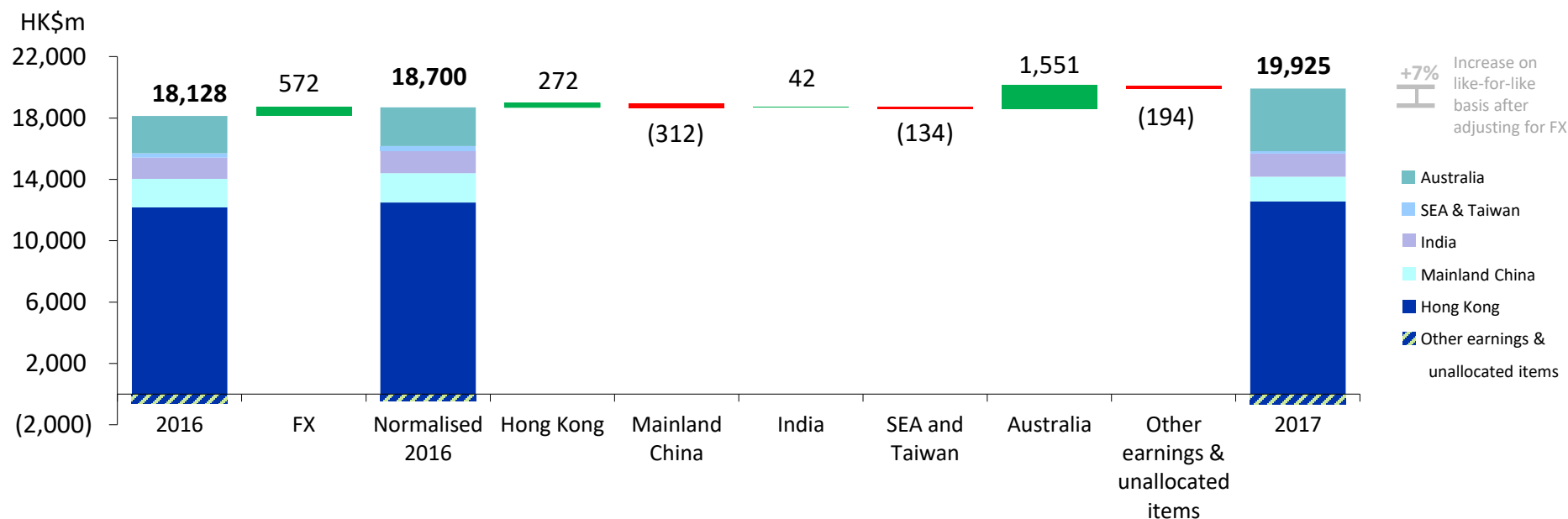
- Increase in earnings from Australia drives increase in tax expense

### Non-controlling interests

- CSG's 30% share of CAPCO

# Adjusted Current Operating Income (ACOI)

HK\$M	2017	2016 ^	
Hong Kong electricity and related activities	13,222	12,809 ^	Dependable performance & continuing strengthening of infrastructure
Mainland China	1,610	1,863	Higher earnings from non-carbon but lower earnings from coal
India	1,511	1,383	Reliable performance across all assets
Southeast Asia and Taiwan	156	271	Higher coal costs & lower energy tariff in Ho-Ping
Australia	4,086	2,436	Solid operational performance & favourable wholesale prices
Other earnings and unallocated items	(660)	(634) ^	Higher innovation and corporate costs partially offset by FX gains
<b>Total</b>	<b>19,925</b>	<b>18,128</b>	10% increase (or +7% normalised for FX)



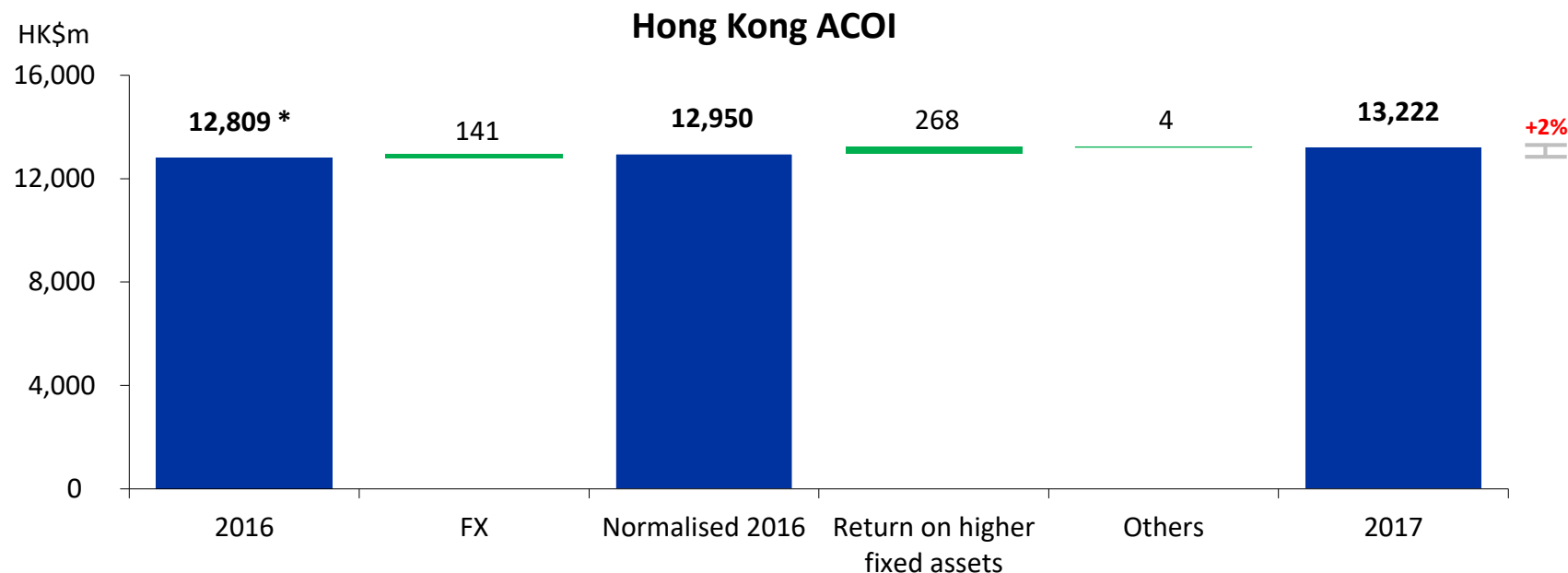
An aerial photograph of the Yangjiang Nuclear Power Station in Guangdong, China. The station is a large industrial complex with multiple buildings and cooling towers, situated on a peninsula. It is surrounded by a large body of water, with a long breakwater extending into the sea. In the background, there are mountains and a coastline with wind turbines. The image is partially framed by a yellow and blue geometric design on the left side.




# Performance by Business Units

Yangjiang Nuclear Power Station, Guangdong, China



# Dependable performance and new opportunities in Hong Kong

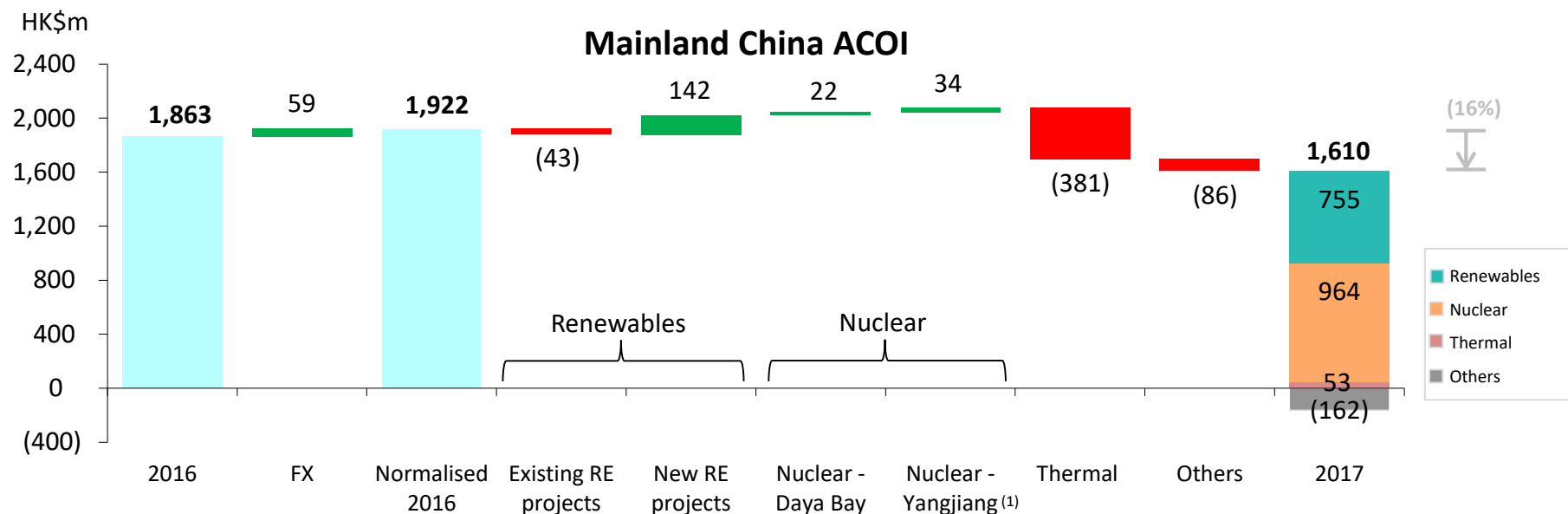


 <b>Operational Performance</b>	 <b>Financial Performance</b>	 <b>Outlook</b>
<p>Local sales flat reflecting mild weather in 1H</p> <p>Supply reliability &gt; 99.999% <sup>(1)</sup></p> <p>Peak demand of 7,155MW, up 125MW with the increase mitigated by demand response initiatives</p> <p>Construction of CCGT progressing well</p> <p>Good progress made on LNG supply and FSRU vessel arrangements. EIA to be submitted to authorities soon</p>	<ul style="list-style-type: none"> <li>Higher earnings predominantly reflecting investment in fixed assets                             <ul style="list-style-type: none"> <li>T&amp;D + Retail capex ~HK\$4.5 bn</li> <li>Generation capex ~HK\$3.5 bn</li> </ul> </li> <li>Others represents PSDC, sales to Guangdong and Hong Kong branch line</li> </ul>	<p>Finalise and commence new 5-year Development Plan for 2018-2023</p> <p>Continue construction of 550MW CCGT</p> <p>Seek approval for offshore LNG terminal and finalise contracting for gas supply</p>

(1) Supply reliability based on average unplanned customer minutes lost per year

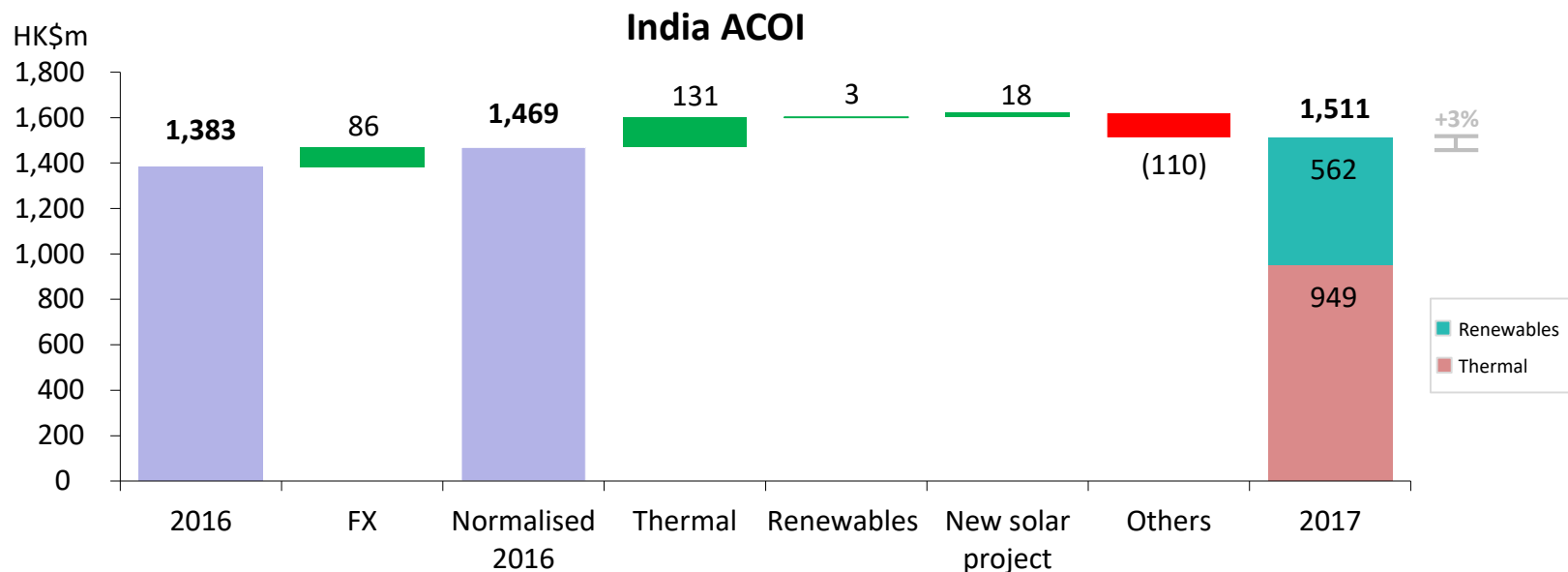
\* 2016 figure has been restated for a change of presentation of other earnings from Hong Kong business to other earnings and unallocated items




# Growth from non-carbon assets offset by lower thermal contribution



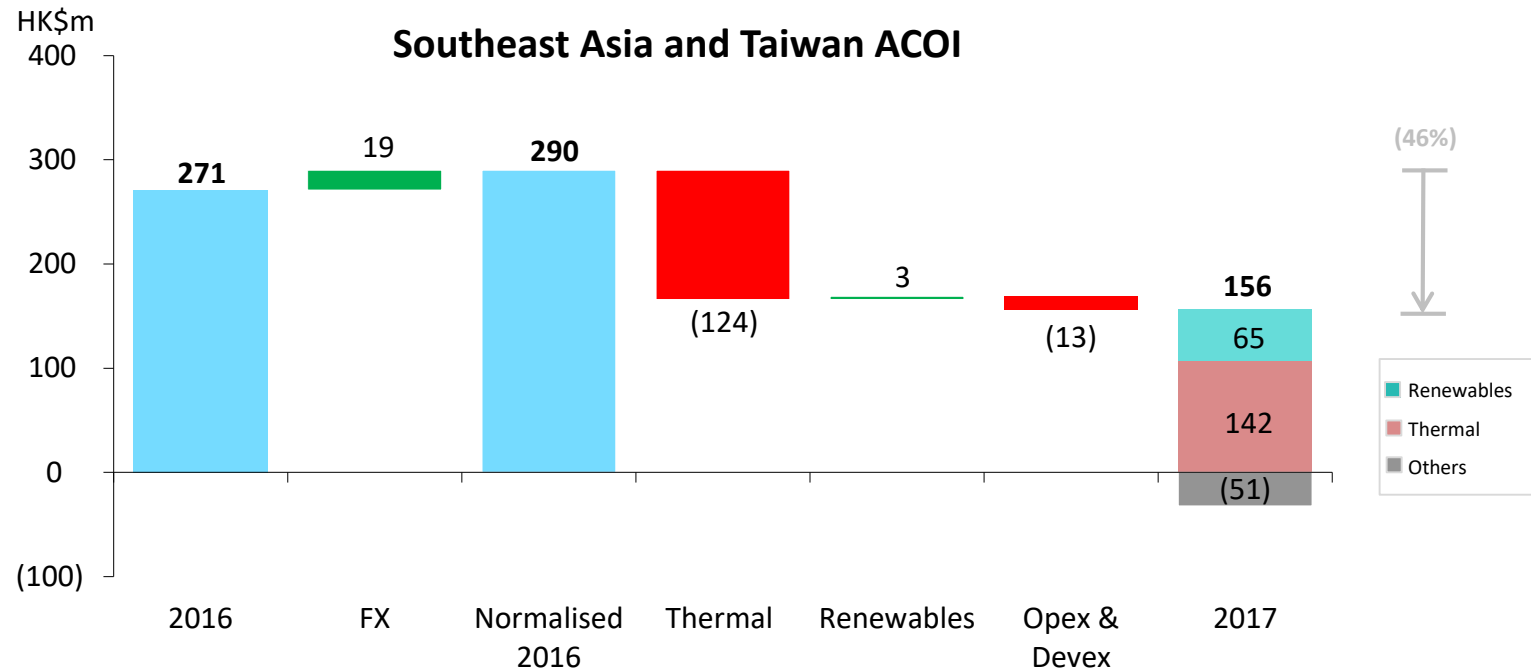
Operational Performance	Financial Performance	Outlook
<b>Renewables (RE)</b> <ul style="list-style-type: none"> <li>Existing projects: higher wind dispatch, solar stable and lower hydro flows</li> <li>New projects added 13MW of solar and 50MW of wind in 2017</li> </ul> <b>Nuclear</b> <ul style="list-style-type: none"> <li>Higher output from Daya Bay in 2017 reflecting shorter refueling outage</li> <li>Completed Yangjiang acquisition in mid-Dec</li> </ul> <b>Thermal</b> <ul style="list-style-type: none"> <li>Reliable operation</li> </ul>	<b>Renewables</b> <ul style="list-style-type: none"> <li>Lower contribution from hydro</li> <li>Contributions from new projects</li> </ul> <b>Nuclear</b> <ul style="list-style-type: none"> <li>Higher earnings from Daya Bay</li> <li>Initial contribution from Yangjiang</li> </ul> <b>Thermal</b> <ul style="list-style-type: none"> <li>Earnings impacted by adverse market conditions including higher coal prices, lower output from some existing units, higher proportion of discounted market sales</li> </ul> <b>Others</b> <ul style="list-style-type: none"> <li>No contribution from divested CGN wind and expense from wind farm closure</li> </ul>	Further increase of contribution from non-carbon generation  Optimise operating performance, output and sales from thermal generation  Adapt operating model as market evolves

# Reliable performance across all assets



 <b>Operational Performance</b>	 <b>Financial Performance</b>	 <b>Outlook</b>
<p><b>Thermal</b></p> <ul style="list-style-type: none"> <li>Plant availability                             <ul style="list-style-type: none"> <li>Paguthan &gt;90%</li> <li>Jhajjar &gt;90% for fiscal year to Mar 17 ~80% for calendar 2017 due to scheduled major outage</li> </ul> </li> <li>Higher utilisation and significantly higher efficiency for Jhajjar</li> </ul> <p><b>Renewables</b></p> <ul style="list-style-type: none"> <li>Production from wind remained steady</li> <li>Veltoor Solar commissioned in late 2017</li> </ul>	<p><b>Thermal - Jhajjar</b></p> <ul style="list-style-type: none"> <li>Earnings increased reflecting strong Jhajjar operational performance</li> </ul> <p><b>Renewables</b></p> <ul style="list-style-type: none"> <li>Stable earnings from assets</li> <li>Initial contribution from Veltoor solar</li> </ul> <p><b>Others</b></p> <ul style="list-style-type: none"> <li>One time costs associated with cancelled Yermala development and provision for receivable from an O&amp;M contractor</li> </ul>	<p>Focus on operational excellence of existing fleet</p> <p>Actively pursue diversification of portfolio</p>

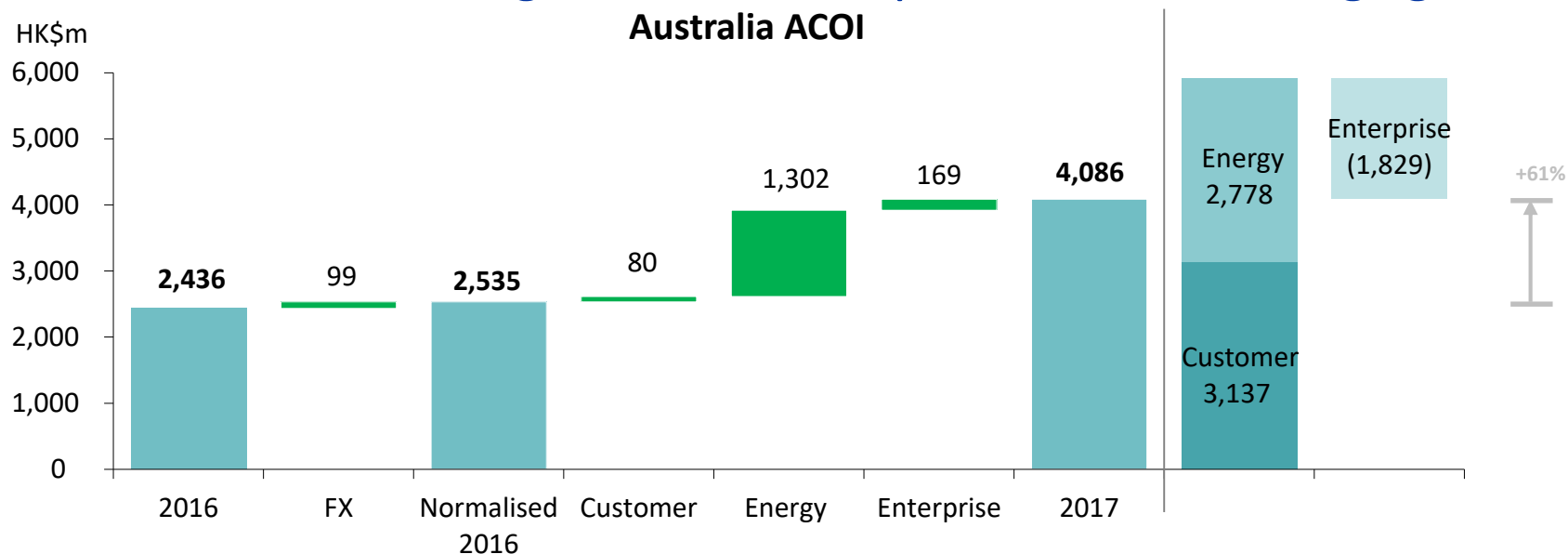
# Lower earnings from thermal asset in Southeast Asia and Taiwan






Operational Performance	Financial Performance	Outlook
<b>Thermal - Ho-Ping</b> <ul style="list-style-type: none"> <li>Lower plant availability caused by typhoon Nesat in July 2017</li> </ul> <b>Renewables - Lopburi</b> <ul style="list-style-type: none"> <li>Good performance and high utilisation</li> </ul>	<b>Thermal - Ho-Ping</b> <ul style="list-style-type: none"> <li>Lower earnings as tariff adjustment in 2017 lagged coal cost increases and less generation after typhoon Nesat</li> </ul> <b>Renewables - Lopburi</b> <ul style="list-style-type: none"> <li>Stable solar resource</li> </ul> <b>Opex and Devex</b> <ul style="list-style-type: none"> <li>Higher expenses as Vietnam projects progress</li> </ul>	Ongoing engagement with Vietnamese Government on Vinh Tan III and Vung Ang II projects



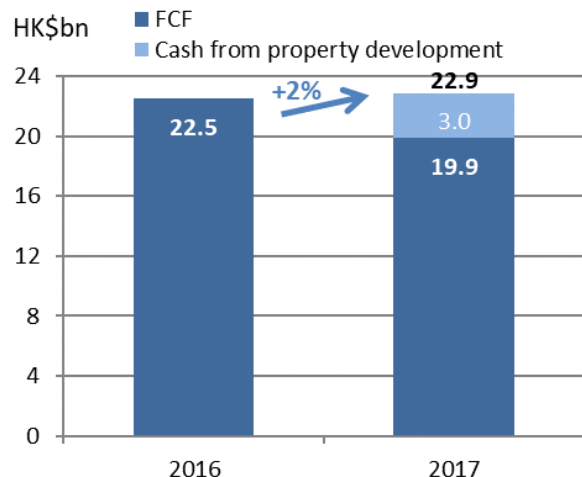
# Value restoration and higher wholesale prices drive earnings growth



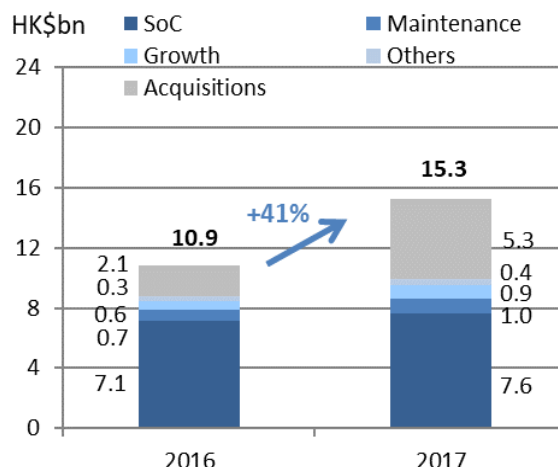
 <b>Operational Performance</b>	 <b>Financial Performance</b>	 <b>Outlook</b>
<p><b>Customer</b></p> <ul style="list-style-type: none"> <li>Supported our most vulnerable customers through advocacy on energy policy</li> <li>Focused on products that provide transparency, certainty and value</li> <li>Power of Choice regulations delivered</li> <li>Customer accounts stable year on year</li> <li>Churn below market average</li> </ul> <p><b>Energy</b></p> <ul style="list-style-type: none"> <li>Planned and extended outages completed at Yallourn and Mt Piper</li> <li>Long term Mt Piper coal supply secured</li> <li>Increased usage of gas generation in support of tight supply</li> </ul>	<p><b>Customer</b></p> <ul style="list-style-type: none"> <li>Earnings flat with minor increase in mass market usage offset by higher energy procurement costs</li> </ul> <p><b>Energy</b></p> <ul style="list-style-type: none"> <li>Higher wholesale energy prices partially offset by higher gas purchase costs and Yallourn coal royalty costs</li> </ul> <p><b>Enterprise</b></p> <ul style="list-style-type: none"> <li>Stable year on year costs inclusive of significant investment in transformation</li> </ul>	<p>Focus on customer service and retention in highly competitive retail market</p> <p>Energy markets remain competitive &amp; volatile</p> <p>Implement coal supply solution for Mt Piper</p> <p>Continuing transformation of business and systems</p> <p>Well intentioned government interventions need coordination. We will continue to advocate for our customers and energy security</p> <p>Evaluating short and long term flexibility for our portfolio such as battery, pumped hydro, demand response and gas peaking assets</p>

# Financial strength unaffected by significant capex

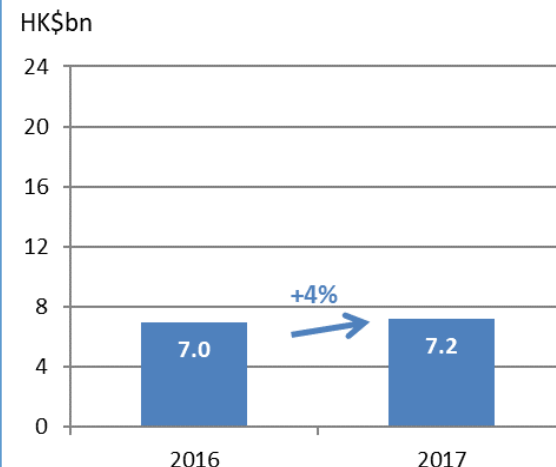
## Free Cash Flow



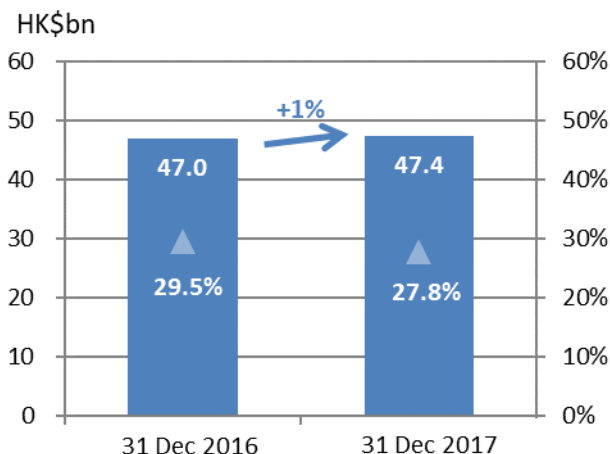
## Capital Investments



## Dividends paid



## Net Debt Net Debt/Total Capital (%)▲



## Financing initiatives

- HK\$5.1 bn bank loan facilities arranged to fund the acquisition of 17% equity stake in Yangjiang nuclear, together with HK\$1.7 bn of RMB-denominated internal resources
- Launched CLP Climate Action Finance Framework
- CAPCO executed a HK\$1.4 bn export credit agency supported loan agreement and issued US\$500 m energy transition bond for the new CCGT
- Jhajjar achieved cost-effective refinancing

## Credit Ratings

### S&P

### Moody's

CLP Holdings

A  
Stable

A2  
Stable

CLP Power  
Hong Kong

A+  
Stable

A1  
Stable

CAPCO #

AA-  
Stable

A1  
Stable

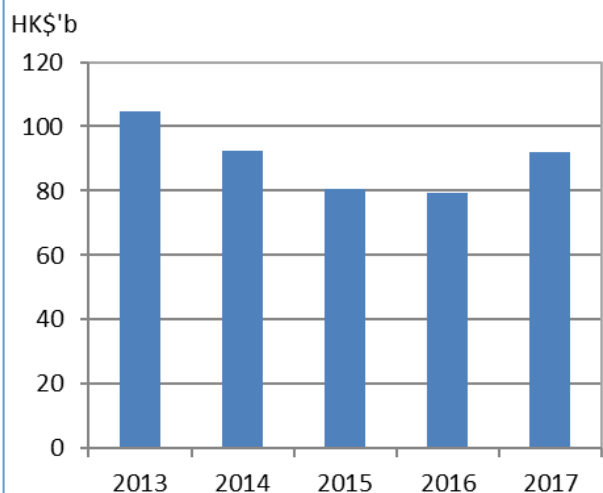
EnergyAustralia

BBB+  
Stable

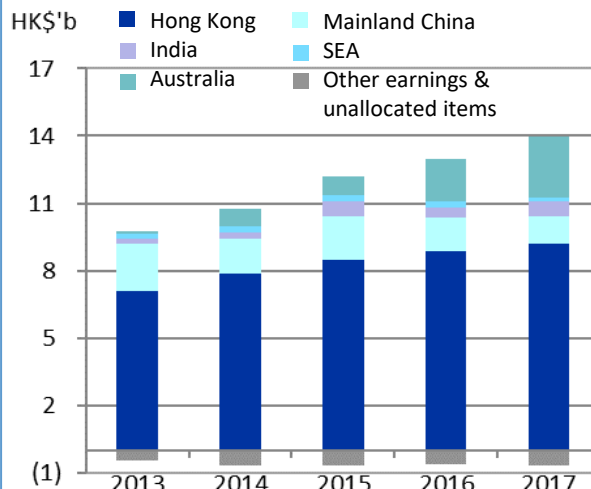
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# Robust financial position and resilient growth

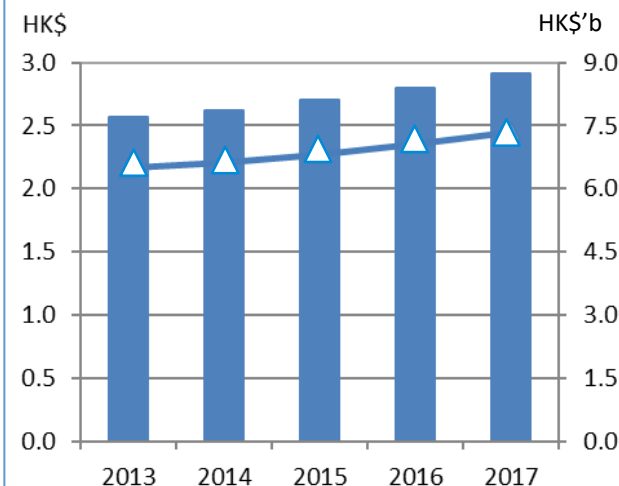
## Revenue



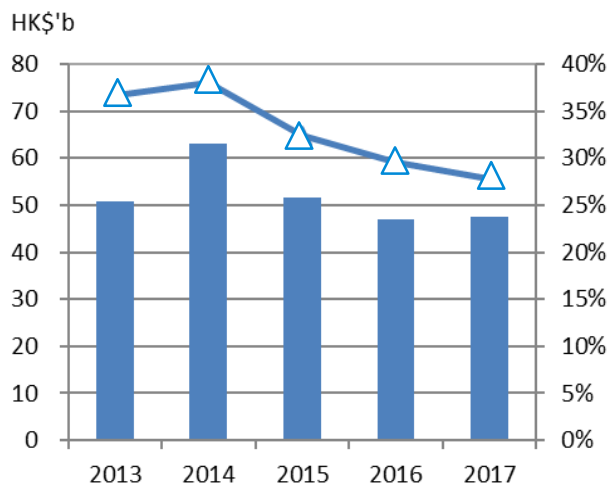
## Operating Earnings



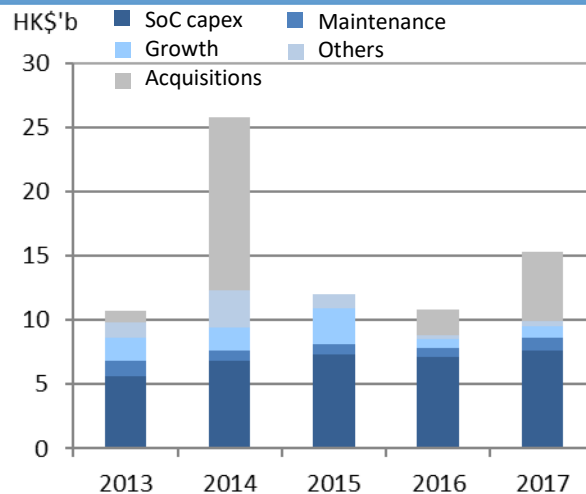
## Dividend per share Total Dividends ▲



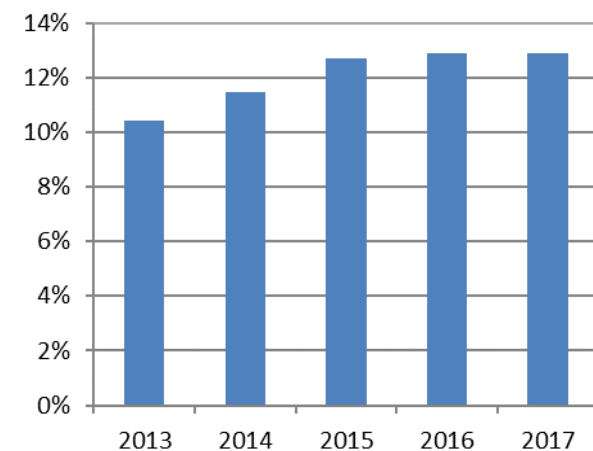
## Net Debt Net Debt/Total Capital (%) ▲



## Capital Investment



## Operating Return On Equity (%) \*



\* Operating Earnings / Average Shareholders' Funds



# Outlook

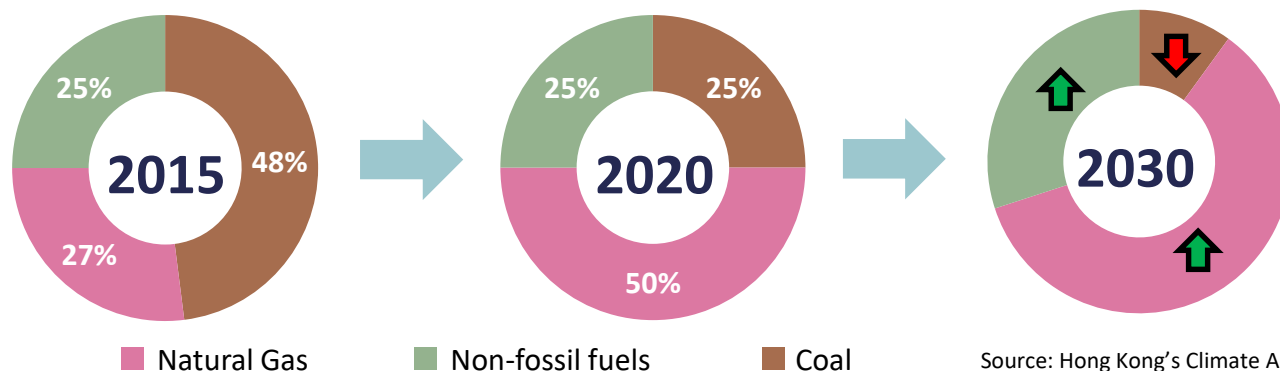
“Strike the Dragon” pre-launch event  
at Lumieres Hong Kong





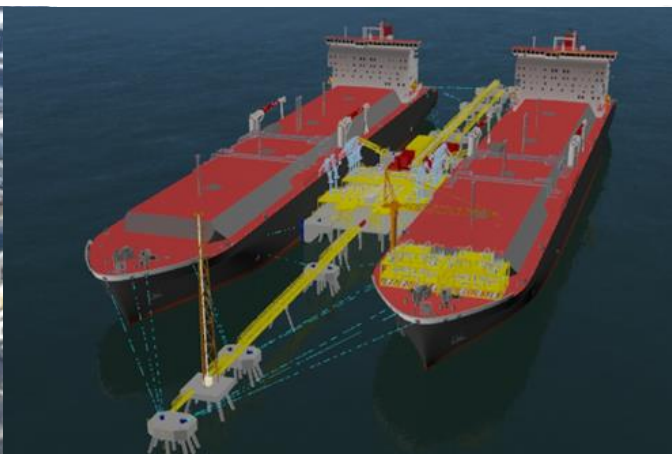
# Hong Kong – 1st Development Plan of new SoC

Hong Kong has ambitious objectives under its Climate Action Plan 2030+



The Development Plan we have submitted aligns with these objectives

- 5 years from Oct 2018 to Dec 2023
- Deliver infrastructure growth
- Address energy security
- Meet fuel mix & environmental objectives
- Integrate renewables initiatives
- Encourage energy efficiency & conservation



# Hong Kong – New Initiatives on Renewables and Energy Efficiency



**Feed-in-Tariff**



**Renewable Energy Certificate**



**New Eco Building Fund**



**Community Energy Saving Fund**

To achieve lower carbon and emission targets for a smarter and sustainable Hong Kong

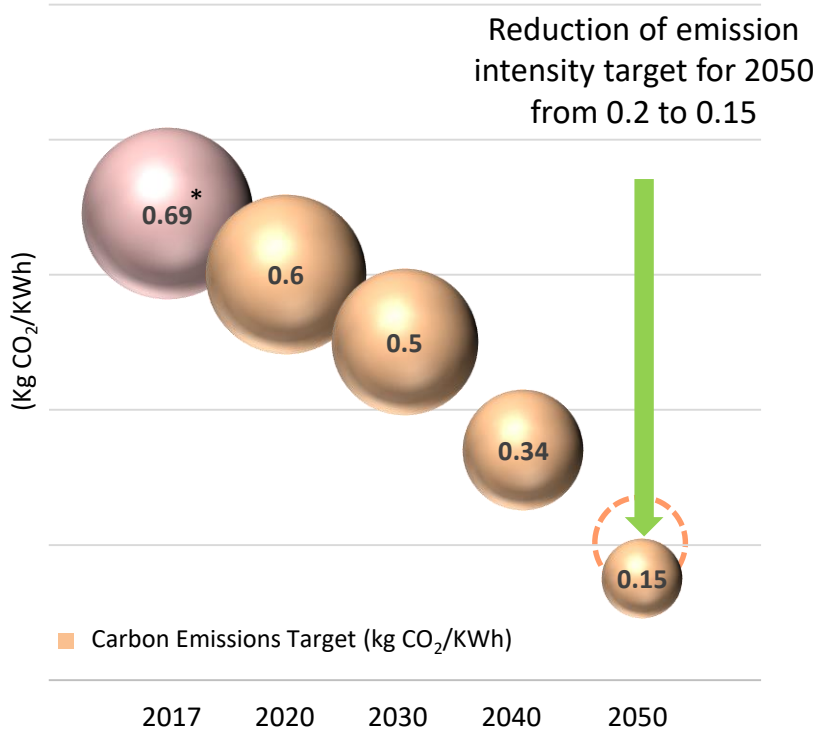
# Driving Innovation and Powering a Smart, Sustainable City



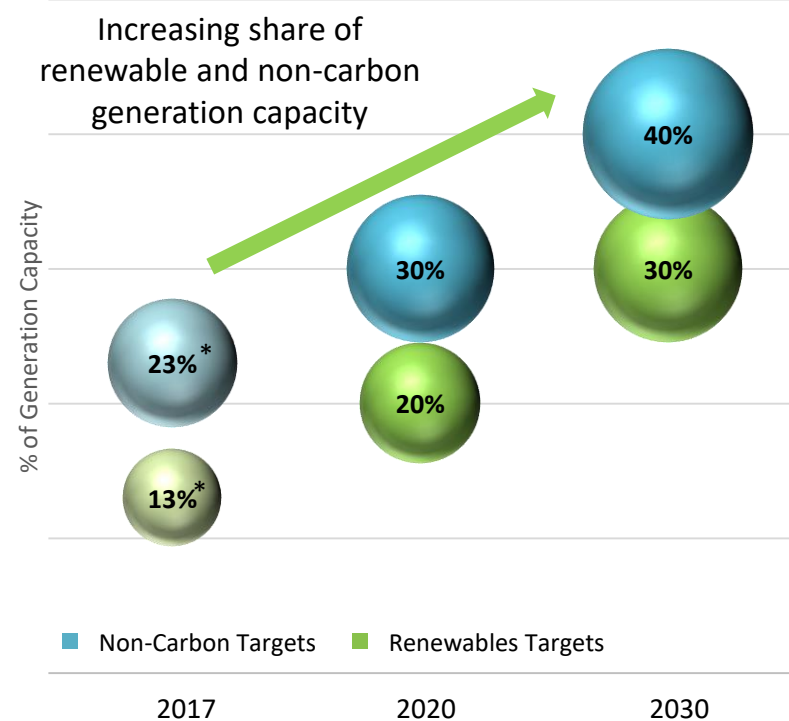
# New Climate Vision Targets and Energy Transition

## CLP's New Climate Vision 2050

### Carbon Emissions Targets



### Clean Energy Targets



Commitments to combat Climate Change strengthened by reducing carbon emissions targets and increasing the share of renewable and non-carbon emitting generation capacity





# Looking forward



India

Broaden portfolio along the energy supply chain



Mainland China

Optimise portfolio as energy reforms evolve



Southeast Asia and Taiwan

Progress Vietnam opportunities



Hong Kong

Deliver new Development Plan and SoC initiatives



Climate Vision 2050

Actively pursue our energy transition and clean energy targets



Australia

Support our customers and deliver value restoration promise

Digital Transition

Transition into a utility of the future





## Questions and Answers

Huai'an Solar Power Station, Jiangsu, China  
incorporating greenhouse enclosures for agriculture





# Appendices

# CLP Group – Financial Highlights – Additional Information

Earnings and Dividends	2017	2016	Change	
Operating earnings (HK\$M)	13,307	12,334	↑	8%
Total earnings (HK\$M)	14,249	12,711	↑	12%
Operating earnings per share (HK\$)	5.27	4.88	↑	8%
Total earnings per share (HK\$)	5.64	5.03	↑	12%
Dividends per share (HK\$)				
First to third interim dividends	1.77	1.71	↑	4%
Fourth interim dividend	1.14	1.09	↑	5%
Total interim dividends	2.91	2.80	↑	4%
Leverage				
Net Debt (HK\$M)	47,411	46,979	↑	1%
Net Debt/Total Capital (%)	27.8%	29.5%	↓	1.7%
Capex (HK\$M)				
SoC Capex	7,598	7,123	↑	7%
Other Capex	7,672	3,743	↑	105%

# CLP Group – Operating Highlights – Additional Information

Operating Information	2017	2016	Change
<b>Safety</b> (Total Recordable Injury Rate)	0.29	0.16 <sup>(5)</sup>	● +0.13
<b>Electricity sent out</b> (TWh) <sup>(1)</sup>	83.9	79.6	● +4.3
<b>Generation Capacity</b> (GW) <sup>(2)</sup>			
Total in Operation	23.5	22.9	● +0.6
Non-Carbon Emitting <sup>(3)</sup>	5.2	4.6	● +0.6
Committed / Under Construction	1.1	0.9	● +0.2
<b>Customer Accounts</b> (Thousand)			
Hong Kong	2,556	2,524	● +1.3%
Australia	2,623	2,625	● Stable
<b>Hong Kong local electricity sales</b> (TWh)	33.2	33.2	● Stable
<b>Reliability in Hong Kong</b> (minutes lost pa) <sup>(4)</sup>	1.57	1.48	● +0.09
<b>Average CO<sub>2</sub> Emission Intensity</b> (kg CO <sub>2</sub> /kWh)			
Equity basis and capacity purchase	0.69	0.72	● -0.03
Equity basis	0.80	0.82	● -0.02

(1) Equity basis and capacity purchase arrangements. Also includes long-term power contracts from facilities in which we hold an equity interest

(2) Equity basis and capacity purchase arrangements

(3) Non-carbon emitting includes wind, hydro, solar and nuclear

(4) Unplanned customer minutes lost - average of the past 36 months. The increase in 2017 was mainly due to the impact of Severe Typhoon Hato

(5) Reclassification of one safety incident in 2016

# CLP Group – Reconciliation of Operating Earnings and ACOI

HK\$M	Hong Kong electricity and related	Mainland China	India	SEA & Taiwan	Australia	Other earnings & unallocated items	Group total
<b>2017 Annual results</b>							
<b>Operating Earnings</b> (as per Segment Information in Annual Report)	<b>8,863</b>	<b>1,508</b>	<b>647</b>	<b>160</b>	<b>2,738</b>	<b>(609)</b>	<b>13,307</b>
Allocation PSDC & HK Branch line	270	(270)	-	-	-	-	-
Allocation of Other Earnings	65	-	-	-	-	(65)	-
<b>Operating Earnings</b> (as per Management Reporting in this presentation pack)	<b>9,198</b>	<b>1,238</b>	<b>647</b>	<b>160</b>	<b>2,738</b>	<b>(674)</b>	<b>13,307</b>
Add back							
Non-controlling interests	837	13	(1)	-	-	-	<b>849</b>
Net finance costs/(income) *	1,269	231	656	(4)	124	2	<b>2,278</b>
Income tax expense	1,960	128	209	-	1,042	14	<b>3,353</b>
Fair value adjustments #	(42)	-	-	-	182	(2)	<b>138</b>
<b>ACOI</b>	<b>13,222</b>	<b>1,610</b>	<b>1,511</b>	<b>156</b>	<b>4,086</b>	<b>(660)</b>	<b>19,925</b>
<b>2016 Annual results ^</b>							
<b>Operating Earnings</b> (as per Segment Information in Annual Report)	<b>8,758</b>	<b>1,668</b>	<b>469</b>	<b>274</b>	<b>1,849</b>	<b>(684)</b>	<b>12,334</b>
Allocation PSDC & HK Branch line	147	(147)	-	-	-	-	-
Allocation of Other Earnings	(62)	-	-	-	-	62	-
<b>Operating Earnings</b> (as per Management Reporting in this presentation pack)	<b>8,843</b>	<b>1,521</b>	<b>469</b>	<b>274</b>	<b>1,849</b>	<b>(622)</b>	<b>12,334</b>
Add back							
Non-controlling interests	831	19	-	-	-	-	<b>850</b>
Net finance costs/(income) *	1,231	192	777	(3)	207	(33)	<b>2,371</b>
Income tax expense	1,879	131	137	-	747	20	<b>2,914</b>
Fair value adjustments #	25	-	-	-	(367)	1	<b>(341)</b>
<b>ACOI</b>	<b>12,809</b>	<b>1,863</b>	<b>1,383</b>	<b>271</b>	<b>2,436</b>	<b>(634)</b>	<b>18,128</b>
* Including net fair value loss/(gain) on financing related derivative financial instruments, and other net exchange loss/(gain) on financing activities and distribution to perpetual capital securities holders							
# Including net fair value loss/(gain) on derivative financial instruments relating to transactions not qualifying as hedges and ineffectiveness of cash flow hedges							
^ Comparative numbers have been restated for a change of presentation of other earnings from Hong Kong segment to other earnings and unallocated items							



# CLP Group – Cash Flow and Financial Structure

HK\$M	2017	2016
<b>Cash Flow</b>		
EBITDAF	27,662	25,355
Less: Items affecting comparability	(369)	(318)
Recurring EBITDAF	27,293	25,037
Less: Movement in SoC items	(1,291)	1,184
Less: Movement in working capital & others	504	(868)
<b>Funds from operations</b>	<b>26,506</b>	<b>25,353</b>
Less: Tax paid	(2,234)	(1,814)
Less: Net finance costs paid	(2,139)	(2,255)
Less: Maintenance capex	(994)	(723)
Add: Dividends from joint ventures & an associate	1,728	1,924
<b>Free Cash Flow</b>	<b>22,867</b>	<b>22,485</b>
<b>Capital Investments</b> <sup>(1)</sup>		
• SoC capex <sup>(2)</sup>	7,598	7,123
• Maintenance capex <sup>(2)</sup>	994	723
• Growth capex <sup>(2)</sup>	946	635
• Others <sup>(3)</sup>	414	306
• Acquisitions of businesses <sup>(4)</sup>	5,318	2,079
<b>Total</b>	<b>15,270</b>	<b>10,866</b>
<b>Dividend paid</b>	<b>7,226</b>	<b>6,973</b>
<b>End of year</b>	<b>2017</b>	<b>2016</b>
<b>Net Debt <sup>(5)</sup> (HK\$M)</b>	<b>47,411</b>	<b>46,979</b>
<b>Net Debt/Total Capital (%)</b>	<b>27.8%</b>	<b>29.5%</b>

## Cash Flow

- Free cash flow increased slightly from last year as cash proceeds from the upfront payment of the Argyle Street co-development substantially offset by higher outflows associated with tariffs rebates & lower recovery of fuel costs from customers in Hong Kong

## Capital Investments

- HK\$7.6 billion SoC capex related to enhancement of transmission and distribution networks, generation facilities (incl. CCGT) and customer services in Hong Kong
- Growth capex represented our continuous investments in wind and solar projects in India and Mainland China
- Maintenance capex mainly represented capital expenditure on existing power plants in Australia
- Acquisition of a 17% interest in Yangjiang Nuclear in Mainland China of HK\$5.3 billion

## Net Debt/Total Capital

- Decrease in net debt/total capital mainly related to higher Group earnings and cash inflows from Argyle Street Project while it is partly offset by additional debt for investments

(1) Capital investments include fixed assets, leasehold land and land use rights, investment properties, intangible assets, investments in and advances to joint ventures and associates, and acquisition of businesses/assets

(2) Capital expenditure on fixed assets and leasehold land and land use rights are further analysed into

- SoC capex - capital expenditure related to the SoC business
- Growth capex - capital expenditure for additional generation capacity
- Maintenance capex - capital expenditure other than the above

(3) Capital investments on intangibles assets and investments in and advances to joint ventures and associates

(4) Acquisition of businesses includes the acquisition of a 17% interest in Yangjiang Nuclear in 2017, Sihong Solar and investment property in 2016

(5) Net of bank balance, cash and other liquid funds

# CLP Group – Financial Obligations at a Glance

	2017	2016
HONG KONG	HK\$M	HK\$M
Total borrowings of CLPH, CLPP, CAPCO & PSDC	44,954	38,013
Minus: Bank balances and liquid funds	(5,964)	(2,683)
<b>Net Debt</b>	<b>38,990</b>	<b>35,330</b>
<b>OVERSEAS</b>		
Total borrowings of EnergyAustralia, India and Mainland China subsidiaries (non-recourse to CLPH)	12,387	13,633
Minus: Bank balance and liquid funds	(3,966)	(1,984)
<b>Net debt</b>	<b>8,421</b>	<b>11,649</b>
<b>CONSOLIDATED</b> total borrowings of CLP Group	57,341	51,646
Minus: Consolidated bank balance and liquid funds	(9,930)	(4,667)
<b>Consolidated Net debt</b>	<b>47,411</b>	<b>46,979</b>
<b>Total Debt/Total Capital</b>	<b>31.8%</b>	<b>31.5%</b>
<b>Net Debt/Total Capital</b>	<b>27.8%</b>	<b>29.5%</b>

Decrease in net debt/total capital mainly related to higher Group earnings, cash inflows from Argyle Street Redevelopment Project which were partly offset by additional debt for investments

# CLP Group – Credit Ratings

	CLP Holdings		CLP Power		CAPCO		EnergyAustralia
	S&P	Moody's	S&P	Moody's	S&P	Moody's	S&P
<b>Long term Rating</b>							
Foreign Currency	A	A2	A+	A1	AA-	A1	BBB+
Outlook	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Local Currency	A	A2	A+	A1	AA-	A1	BBB+
Outlook	Stable	Stable	Stable	Stable	Stable	Stable	Stable
<b>Short term Rating</b>							
Foreign Currency	A-1	P-1	A-1	P-1	A-1+	P-1	-
Local Currency	A-1	P-1	A-1	P-1	A-1+	P-1	-

In 2017, S&P upgraded the ratings of CLPH, CLP Power Hong Kong and EnergyAustralia to A (from A-), A+ (from A) and BBB+ (from BBB) respectively. CAPCO received AA- and A1 from S&P and Moody's respectively for the first time in June 2017

# CLP Group – Highlights of Financing Activities

## CLP Holdings

- **Ample liquidity in the Group** with undrawn facilities of HK\$25.9bn and HK\$9.9bn bank balances as at 31 December 2017
- Arranged HK\$5.1bn 2-year bank loan facilities at preferential interest rates to fund the acquisition of 17% equity stake in Yangjiang nuclear project, together with HK\$1.7bn of RMB-denominated internal resources
- CLP Climate Action Finance Framework was established to facilitate the arrangement of socially responsible and sustainable financings (e.g. green/new energy bonds and energy transition/emission reduction bonds) by CLP Group business units. This will assist the Group achieve the goals set out in our Climate Vision 2050.

For more information  
on CLP Climate Action  
Finance Framework



## CLP Power Hong Kong

- **New financing obtained at extremely cost effective interest rates.** CLP Power Hong Kong arranged HK\$1.3bn three-year bank loan facilities, and HK\$0.8bn 10 to 15-year fixed rate JPY, HKD and AUD private placement bonds at 0.38% - 3.92% coupon rates. Swapped back into HK dollars at levels better than hypothetical US dollar public bonds.

## CAPCO

- **Financing for CCGT project was completed** with a HK\$4.3bn five-year commercial loan facility and a HK\$1.4bn 15-year facility supported by export credit agency in January and March 2017 respectively. In July 2017, CAPCO issued US\$500m (HK\$3.9bn) 10-year fixed rate Energy Transition Bond at 3.25% coupon under a newly established CLP Climate Action Finance Framework and Medium Term Note (MTN) programme to refinance a major portion of the commercial loan for CCGT project. This bond carries a very competitive 1.025% interest margin over the 10-year U.S. Treasury Note, the tightest spread in such tenor ever achieved by a utility company in Hong Kong
- MTN Programme established for the first time which carries AA-/A1 credit ratings from S&P/Moody's and allows bonds issuance of up to US\$2bn

## Mainland China

- **Continued financing at competitive terms.** Arranged RMB204m (HK\$245m) and RMB78m (HK\$93m) project loans for Fangchenggang Phase I's emission control and energy saving project and Huai'an Solar project respectively

## India

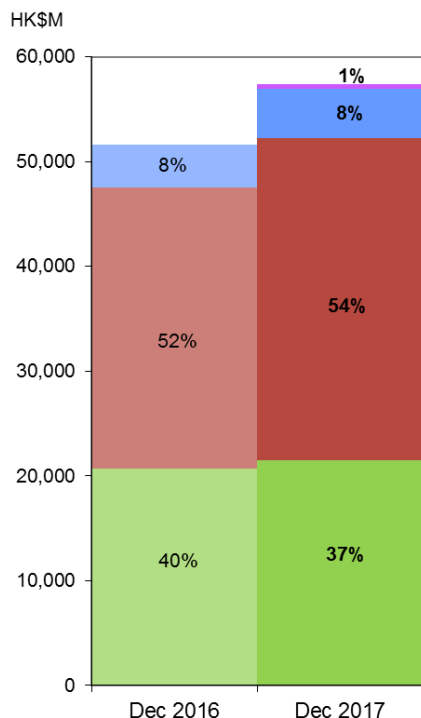
- **Lower interest margins** by up to 1% after successful refinancing and negotiation with lenders. Jhajjar Power Limited issued INR2.7 bn (HK\$326m) five and six-year corporate bonds to refinance an existing U.S. dollar loan

## EnergyAustralia

- **Stronger balance sheet and greater financing flexibility** upon continued deleveraging

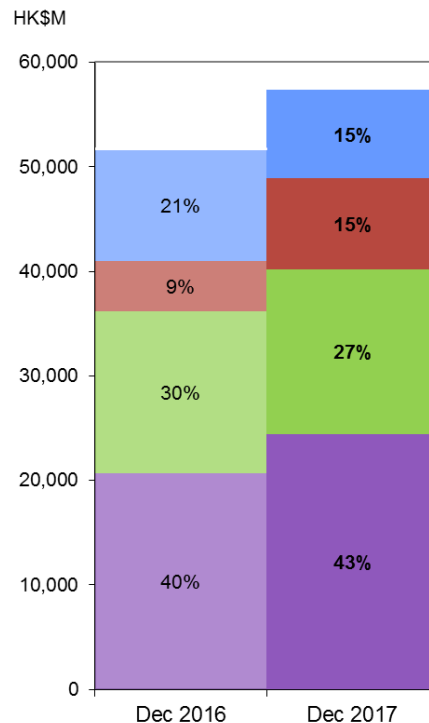
# CLP Group – Loan Balances by Type and Maturity

**Loan Balance - Type**



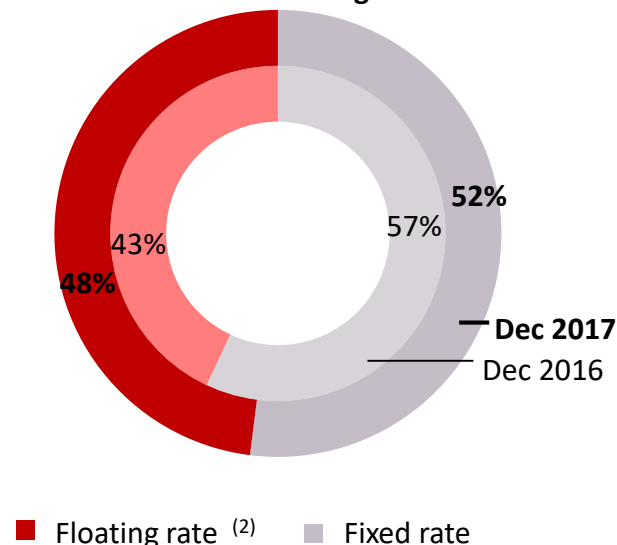
■ Export Credit Loan  
■ Money Market Line  
■ Medium Term Notes / Private Placement / Bonds  
■ Term Loans

**Loan Balance - Maturity <sup>(1)</sup>**



■ Within 1 year  
■ 1 - 2 years  
■ 2 - 5 years  
■ Beyond 5 years

**Proportion of debt on fixed and floating rate**



- 1) The maturity of revolving loans is in accordance with the maturity dates of the respective facilities instead of the current loan drawdown tenors
- 2) For floating rate borrowings, if assuming 1% increase in interest rate and based on outstanding debt balance as at 31 December 2017, the additional interest payment is around HK\$278m per annum
- 3) CLP continues to obtain debt (re)financing at very cost effective interest rates. Some representative examples in 2017 are highlighted on page 34 (“CLP Group – Highlights of Financing Activities”)

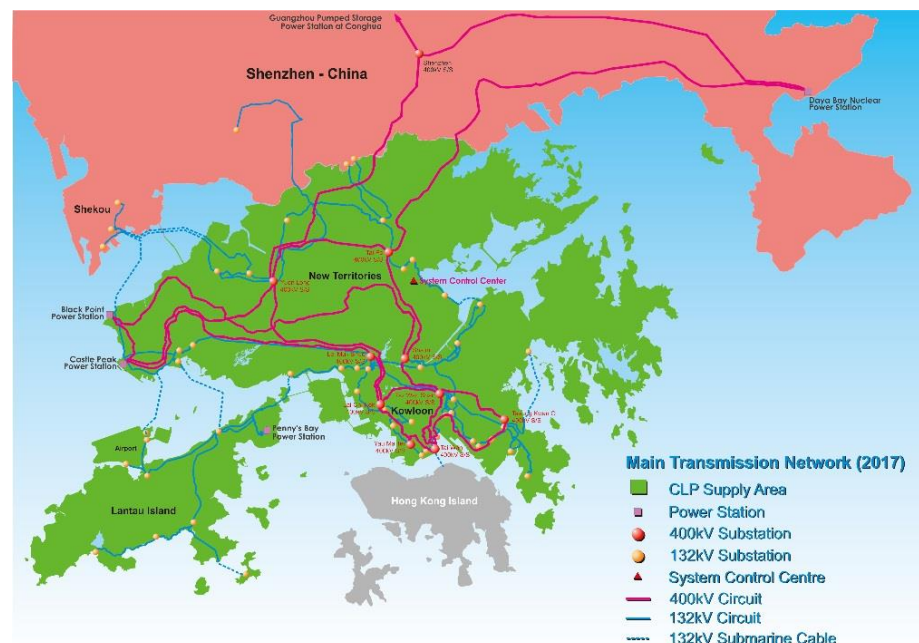


# Hong Kong – Growing Business Scale

Generation	Transmission	Distribution	Retail
8,913 MW of installed capacity	> 15,600 km of transmission and high voltage distribution lines	232 primary and > 14,400 secondary substations	33,164 GWh sold and 2.56 million customer accounts

During 2017:

- Local electricity sales decreased 0.2% to 33,164 GWh as compared with 2016
- No. of customer accounts increased by 32k to 2,556k as compared with 2016
- Major infrastructure projects ongoing
- Construction of a new 550MW gas-fired generation unit at Black Point Power Station in progress and on schedule for commissioning the unit before 2020
- Commissioned 2 new 132kV substations to provide a power supply to the new border control point at Heung Yuen Wai in the northeast of Hong Kong and a data centre in Tseung Kwan O respectively
- Over 390 km of new transmission and high voltage distribution lines & over 200 new substations added
- Opened a Smart Energy Experience Centre and launched a revamped mobile app to enhance customer engagement



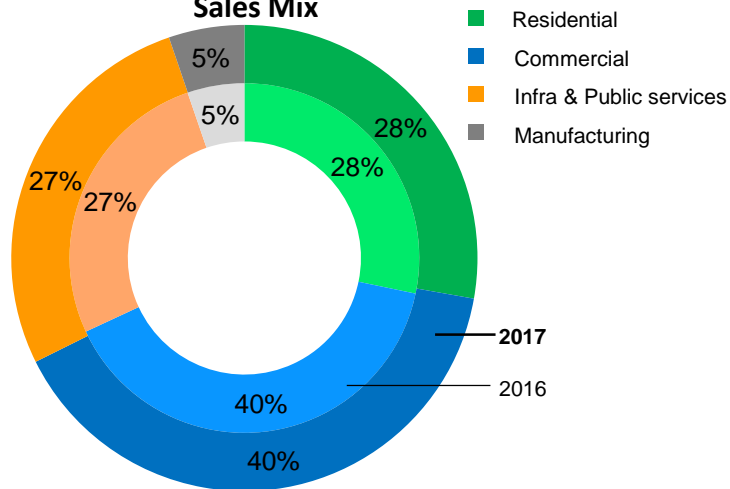
We generate, transmit and distribute electricity to over 80% of Hong Kong's population in Kowloon, the New Territories and on Lantau Island

# Hong Kong – Electricity Sales and Capex

## Electricity Sales

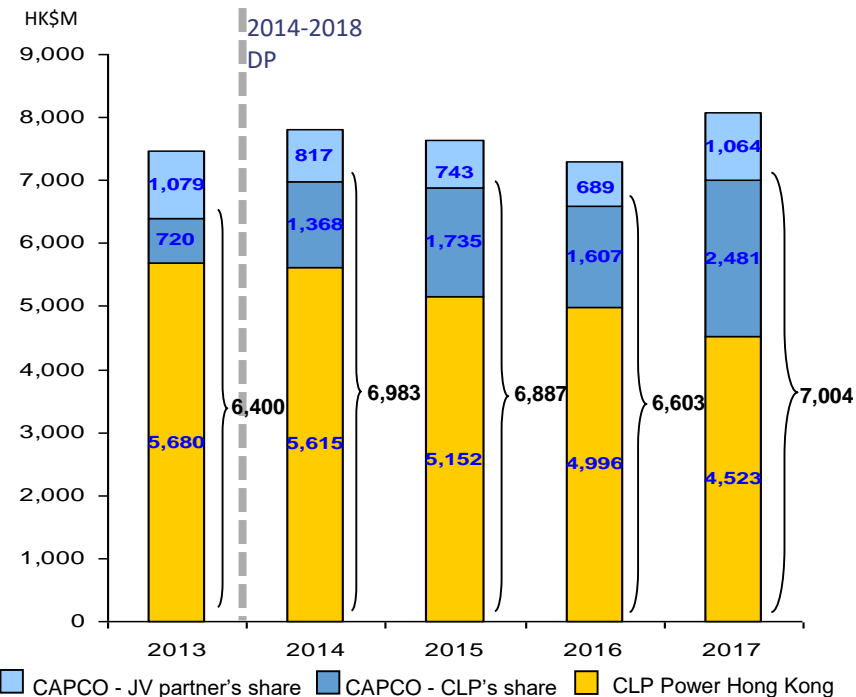
GWh	2017	2016	Change
Residential	9,217	9,394	(1.9%)
Commercial	13,220	13,234	(0.1%)
Infrastructure & Public Services	8,987	8,858	1.5%
Manufacturing	1,740	1,751	(0.6%)
<b>Total Local Sales</b>	<b>33,164</b>	<b>33,237</b>	<b>(0.2%)</b>
Export Sales	1,341	1,205	11.3%
<b>Total Sales</b>	<b>34,505</b>	<b>34,442</b>	<b>0.2%</b>

## Sales Mix



## Capital Expenditure

HK\$M	2017	2016	Change
CLP Power Hong Kong	4,523	4,996	(9.5%)
CAPCO	3,545	2,296	54.4%
<b>Total Capex</b>	<b>8,068</b>	<b>7,292</b>	<b>10.6%</b>



■ CAPCO - JV partner's share ■ CAPCO - CLP's share ■ CLP Power Hong Kong

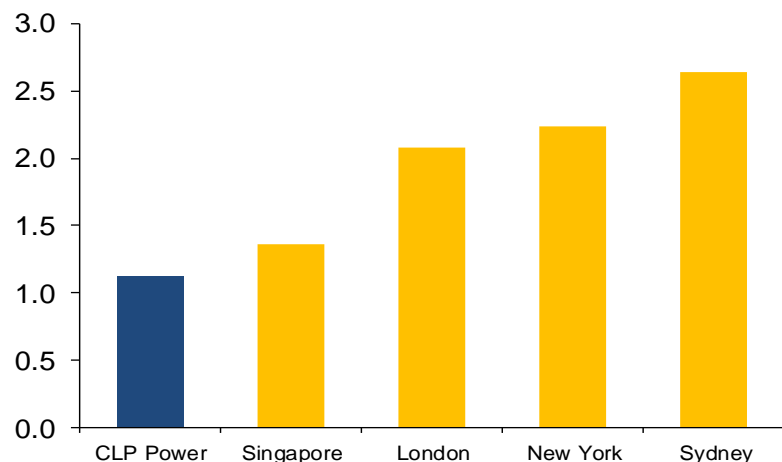
Total Capital Expenditure in line with Development Plan (DP)

Capex incurred up to December 2017 of HK\$30.8bn,  
vs. Development Plan from January 2014 to September 2018: HK\$37.1bn

# Hong Kong – Tariff, Reliability & Environmental Improvement

HK\$/kWh

## Low Tariff

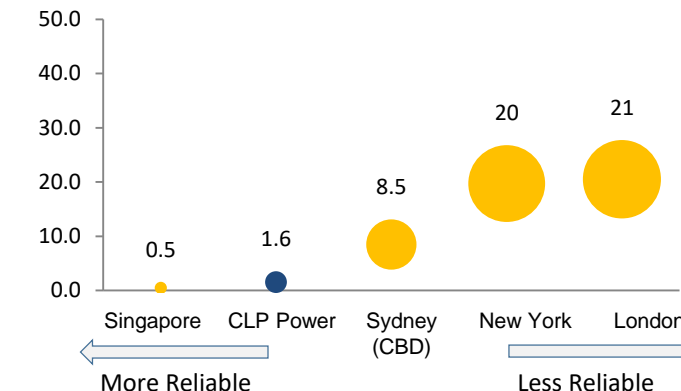


Remarks:

Comparison based on average monthly domestic consumption of 275kWh  
Tariff and exchange rate at Jan 2018

## High Reliability

Unplanned customer minutes lost per year



Remarks:

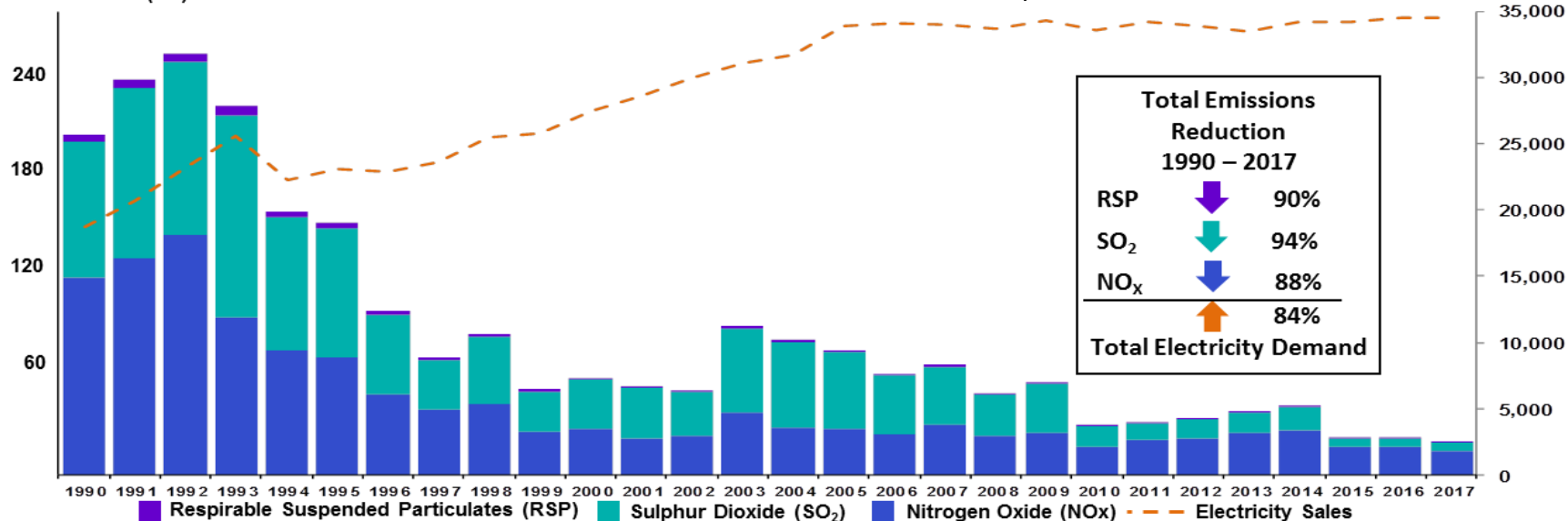
2015-2017 average for CLP Power, 2014-2016 average for all other cities  
There is no overhead lines in Singapore

## Environmental Improvement

Total emissions (KT)

Over 88% emissions reduction even with 84% increase in electricity sales since 1990

Electricity Sales (GWh)

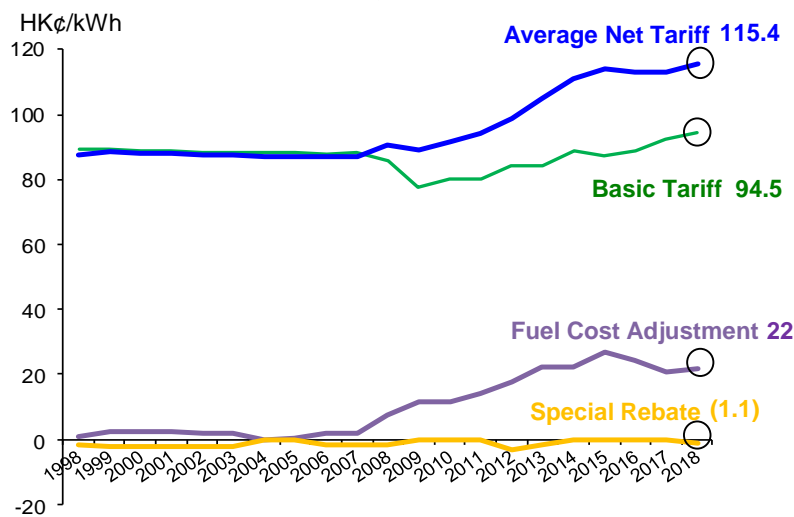


### Total Emissions Reduction 1990 – 2017

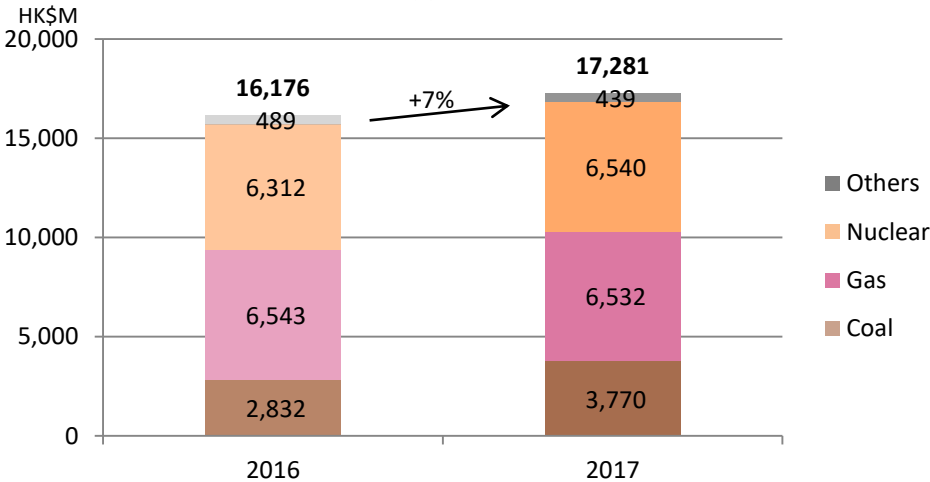
RSP	↓	90%
SO <sub>2</sub>	↓	94%
NO <sub>x</sub>	↓	88%
Total Electricity Demand		↑ 84%

# Hong Kong – Tariff, Energy Cost, Fuel Mix and Gas Volume

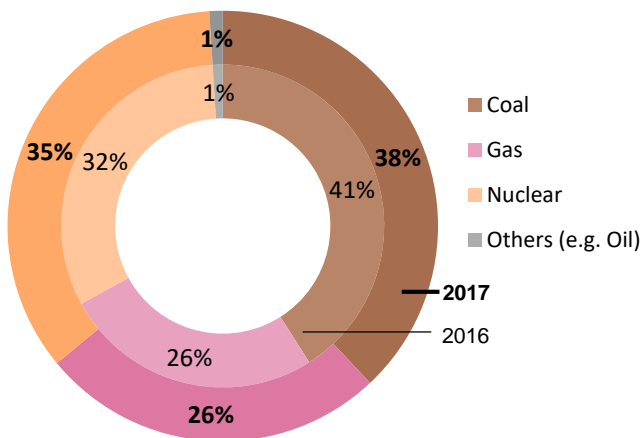
Average tariff



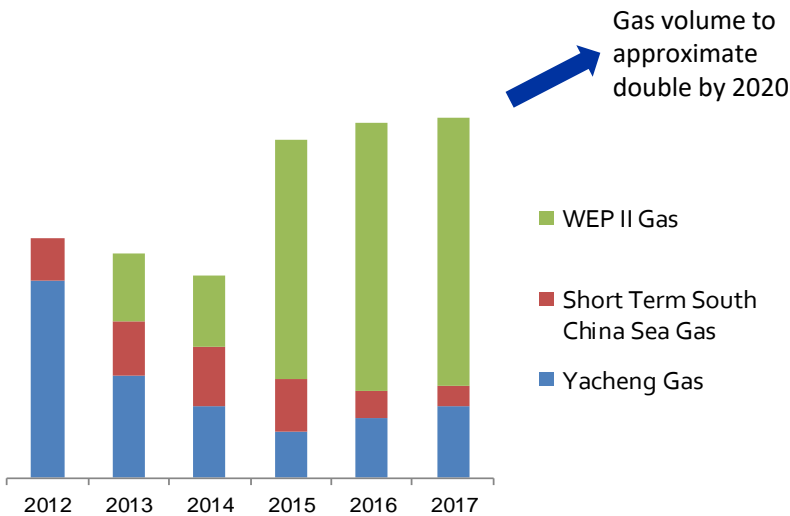
Energy Cost



Fuel Mix  
(based on MWh generated/purchased)



Gas Volume



# Mainland China – Financials (HK\$)



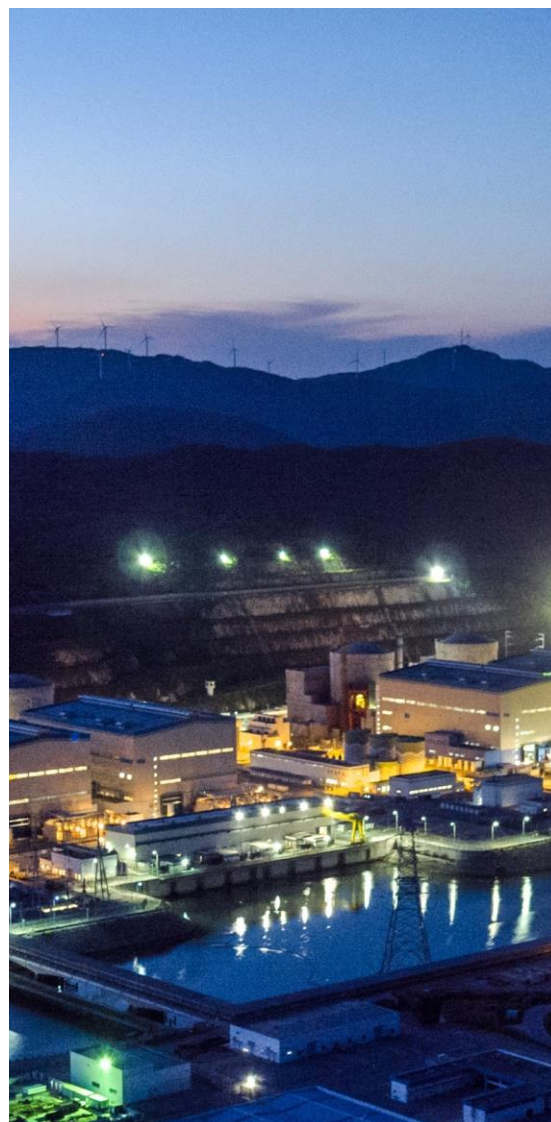
Mainland China

HK\$M	Operating/Total Earnings		ACOI	
	2017	2016	2017	2016
<b>Renewable</b>	<b>441</b>	<b>404</b>	<b>755</b>	<b>694</b>
- Wind	245	202	352	283
- Hydro	100	121	228	272
- Solar	96	81	175	139
<b>Nuclear</b>	<b>913</b>	<b>863</b>	<b>964</b>	<b>908</b>
<b>Thermal</b>	<b>45</b>	<b>429</b>	<b>53</b>	<b>437</b>
- Shandong	58	250	63	265
- Guohua	67	170	70	168
- Fangchenggang	(80)	9	(80)	4
<b>Operating and development expenditure</b>	<b>(161)</b>	<b>(175)</b>	<b>(162)</b>	<b>(176)</b>
<b>Operating earnings /ACOI</b>	<b>1,238</b>	<b>1,521</b>	<b>1,610</b>	<b>1,863</b>
Impairment provision for Beijing Yire Power Station	-	(58)		
Impairment provision for Fangchenggang	-	(199)		
Reversal of over-provision on capital gain tax	-	83		
<b>Total earnings</b>	<b>1,238</b>	<b>1,347</b>		

The average foreign exchange rates used to convert Mainland China Segment earnings to Hong Kong dollars are 1.16487 for 2016 and 1.15711 for 2017. Note that in the ACOI variance analysis presented in the body of the presentation. 2016 earnings are adjusted for changes in scope and foreign exchange before year on year variance in underlying performance is illustrated



# Mainland China – Financials (Local Currency)

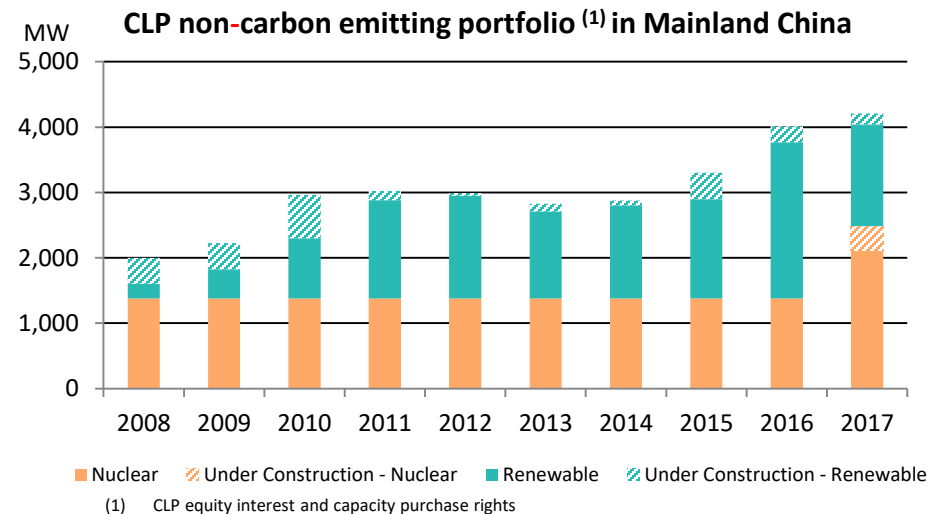


Mainland China

RMB'M	Operating/Total Earnings		ACOI	
	2017	2016	2017	2016
<b>Renewable</b>	<b>381</b>	<b>347</b>	<b>653</b>	<b>596</b>
- Wind	212	173	304	243
- Hydro	86	104	197	234
- Solar	83	70	152	119
<b>Nuclear</b>	<b>789</b>	<b>741</b>	<b>833</b>	<b>780</b>
<b>Thermal</b>	<b>39</b>	<b>369</b>	<b>46</b>	<b>375</b>
- Shandong	50	215	54	228
- Guohua	58	146	61	144
- Fangchenggang	(69)	8	(69)	3
<b>Operating and development expenditure</b>	<b>(162)</b>	<b>(117)</b>	<b>(163)</b>	<b>(118)</b>
<b>Operating earnings /ACOI</b>	<b>1,047</b>	<b>1,340</b>	<b>1,369</b>	<b>1,633</b>
Impairment provision for Beijing Yire Power Station	-	(50)		
Impairment provision for Fangchenggang	-	(171)		
Reversal of over-provision on capital gain tax	-	71		
<b>Total earnings</b>	<b>1,047</b>	<b>1,190</b>		

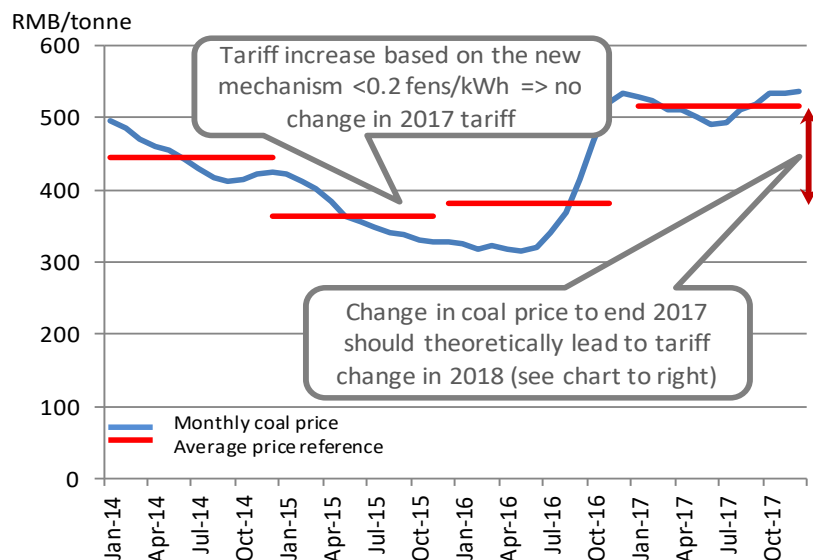
# Mainland China – Yangjiang Nuclear

- On 12 December 2017, we completed the acquisition of a 17% interest in 6,516 MW Yangjiang nuclear facility in Guangdong (1,108 equity MW)
- Earnings sharing commenced from 12 December 2017
- Consideration
  - Purchase consideration: RMB5.0bn (around HK\$5.9bn) plus audited completion payment
  - Total Investment: Not exceeding RMB7.0bn (~ HK\$8.3bn) to full COD of 6 Units in 2019
- Units 1-4 in operation; Units 5 & 6 under construction and expected to commission during 2018-2019
- Market in 2018
  - Majority of output will be paid according to the nuclear benchmark tariff with the remainder subject to a competitive discount process



# Mainland China – Coal-fired projects

## NDRC Coal Price Index

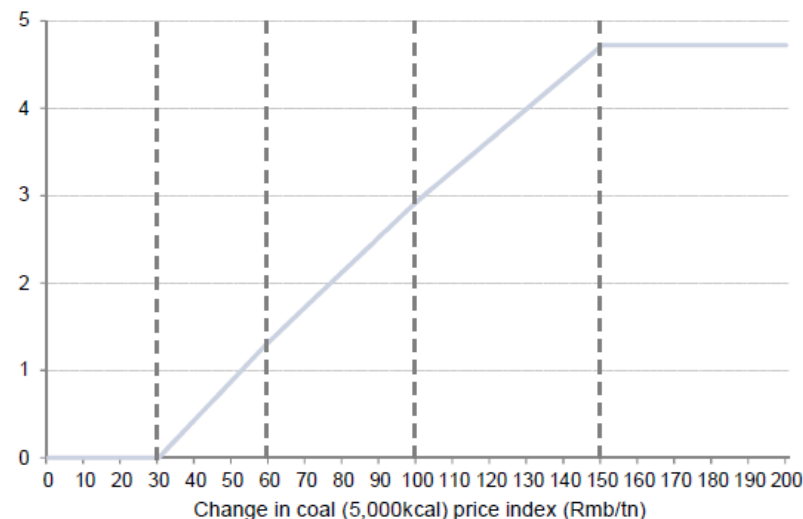


## Impact of coal tariff on CLP

- Despite a significant theoretical annual tariff increase being due in January 2018, to date (February 2018) no tariff adjustment has been announced
- Tariff adjustments may not necessarily be passed on under market sales arrangements
- Benchmark tariff increased marginally on 1 July 2017:
  - NDRC eliminated or reduced certain specialised funds, with benefits passed on in the form of tariff increases
  - Tariff increases for our coal assets on 1 July were:
    - Guohua – 2-3%
    - Shandong – 3%
    - FCG – 1.6% (limited benefit as 100% market sales)

## Tariff setting mechanism

Changes to on-grid coal-fired power tariff (RMB fen/kWh)



Source: Goldman Sachs report

- In December 2015, NDRC announced a new fuel cost pass through policy for power producers
- Annual adjustment on power tariff based on the average coal price index in the preceding year on a tiered structure to be applied from 1 January each year
  - If coal price increase less than RMB30/ton, there would be no fuel cost pass through
  - If coal price increase between RMB30-150, fuel cost will be passed through based on graph above
  - If coal price increase more than RMB150/ton, that portion will not have any pass through
- Minimum tariff change threshold: If the calculated tariff change in a given year is below 0.2 fens/kWh, the tariff change would be postponed from the current cycle to the next year

# Mainland China – Market sales in 2017



Province	Projects (Equity MW)
Guangxi	FCG thermal (1,806MW)
Yunnan	Xundian Wind (50MW) Xicun Solar (84MW) Dali Yang_er Hydro (50MW)
Sichuan	Jiangbian Hydro (330MW)
Gansu	Jinchang Solar (43MW)
Liaoning	Suizhong thermal (564MW) Mazongshan Wind (12MW) Qujiagou Wind (12MW)
Inner Mongolia	Zhungeer thermal (257MW)
Jilin	Qian'an Wind (99MW) Changling II Wind (22MW) Datong Wind (24MW) Shuangliao Wind (48MW)
Tianjin	Panshan thermal (207MW)
Hebei	Sanhe thermal (220MW)
Shaanxi	Shenmu (108MW)

Market sales are prevailing in various forms in different provinces in China. Overall around 38% of our share of generation volumes were under market sales in 2017. Discounts offered have been variable from low single digit for coal up to low double digit for some renewables. It is expected that market sales will continue to increase going forward.

# Mainland China – Climate Policy and National Carbon Market

## China set ambitious climate change targets

2020

- Reduce CO2 emissions per unit of GDP by 40-45% compared to 2005 level
- Increase share of non-fossil fuel energy to 15%
- 9% of power generation from non-hydro renewables

2030

- Reduce CO2 emissions per unit of GDP by 60-65% compared to 2005 level
- By 2030: Increase share of non-fossil fuel energy to 20%
- Peak CO2 emissions

### National Emission Trading Scheme (ETS) market

- In December 2017, the Chinese Government announced the launch of a nationwide carbon market, which is set to be the world's largest carbon trading system and underlines the country's pledge to peak carbon emissions by the end of 2030. The initial phase of the market will cover only power generation
- Power generators will be granted a certain amount of free allowance by the Government and those emitting beyond the allocation will have to procure the shortfall from the market
- Renewable energy (RE) companies may benefit from selling China Certified Emission Reductions (CCERs)
- Seven regional pilot scheme were launched since 2013
- Continue to monitor the opportunities and impact arise from the new policy

### Renewable Energy Certificates (RECs)

- A market-based mechanism which allows certain RE operators (exclude offshore wind farms and distributed solar projects) to earn the subsidy portion of tariffs through the issuance of green certificates
- RECs mechanism may replace the current feed-in-tariff scheme for renewables
- Voluntary launched in July 2017
- Mandatory system may be launched in 2018
- Trading price in the voluntary phase capped at the level of RE subsidy
- Continue to monitor the opportunities and impact arise from the new policy

National ETS market and RECs are key for China to meet its climate change targets



# India - Financials



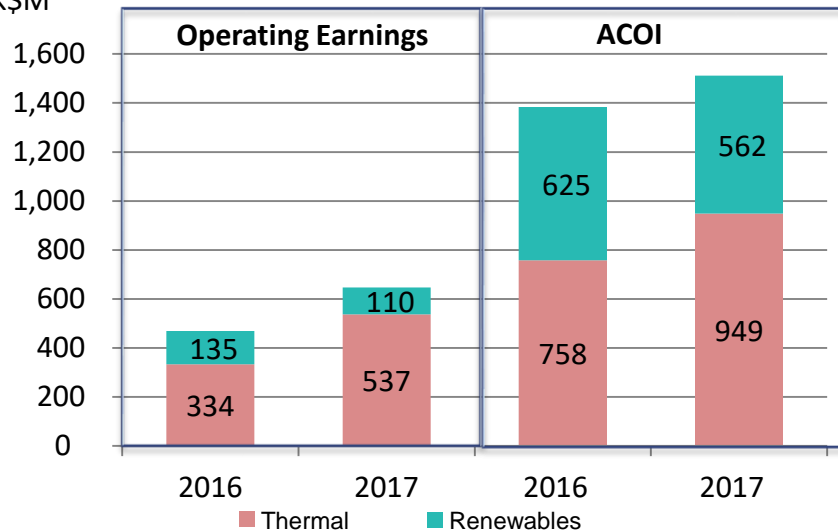
India

	HK\$		Local Currency	
	2017	2016	2017	2016
	HK\$M	HK\$M	INR'M	INR'M
<b>ACOI</b>				
Thermal (Jhajjar)	676	492	5,633	4,270
Thermal (Paguthan)	273	266	2,275	2,309
Renewables	562	625	4,683	5,424
<b>Total</b>	<b>1,511</b>	<b>1,383</b>	<b>12,591</b>	<b>12,003</b>
<b>Operating earnings</b>				
Thermal (Jhajjar)	315	117	2,625	1,015
Thermal (Paguthan)	222	217	1,850	1,883
Renewables	110	135	916	1,172
<b>Total</b>	<b>647</b>	<b>469</b>	<b>5,391</b>	<b>4,070</b>

The average foreign exchange rates used to convert Indian Segment earnings to Hong Kong dollars are 0.11522 for 2016 and 0.12001 for 2017. Note that in the ACOI variance analysis presented in the body of the presentation, 2016 earnings are adjusted for changes in scope and foreign exchange before year on year variance in underlying performance is illustrated.

# India - Renewable Generation

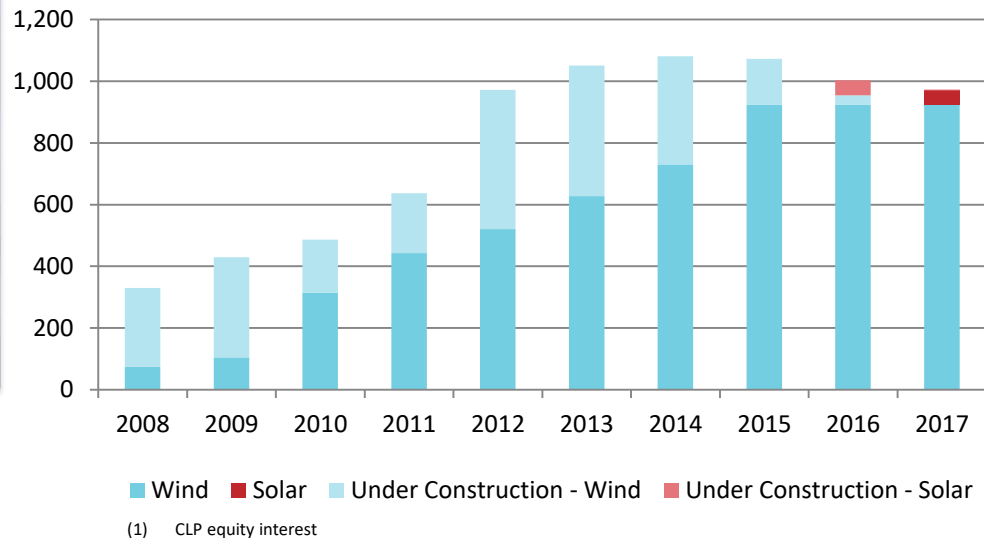
HK\$M



Lower renewables earnings in 2017 reflects one-off cancellation cost of Yermala wind and provision for receivable from an O&M contractor

MW

CLP Renewable Portfolio<sup>(1)</sup> in India



- We are one of India's largest foreign investors in the power sector, and one of the largest developers of wind power
- The renewable generation portfolio in India has been diversified with our first solar project Veltoor (100/49MW) commissioned 94MW in 2017. Lower wind capacity over 2016 & 2017 reflects the cancellation of the Yermala project
- India's economic growth has softened recently, which has had a negative impact on power demand. However, we remain confident of the long-term prospects of India's power industry
- The current Power Purchase Arrangement for Paguthan will end in December 2018. Discussion with off-taker is ongoing for post-PPA arrangements
- We will continue our prudent approach in exploring new opportunities in renewable areas in support of India's goal of increasing the share of its clean electricity supply. In addition we are looking for growth opportunities along the energy supply chain including evaluating transmission and distribution opportunities

# Southeast Asia & Taiwan – Financials



SEA & Taiwan

	HK\$		Local Currency	
	2017	2016	2017	2016
	HK\$M	HK\$M	M	M
<b>ACOI</b>				
Thermal	142	249	NT\$554	NT\$1,033
Renewables	65	60	THB281	THB271
Operating expenditure	(13)	(13)	-	-
Development expenditure	(38)	(25)	-	-
<b>Total</b>	<b>156</b>	<b>271</b>		
<b>Operating earnings</b>				
Thermal	142	249	NT\$554	NT\$1,033
Renewables	65	60	THB281	THB271
Operating expenditure	(13)	(13)	-	-
Development expenditure	(34)	(22)	-	-
<b>Total</b>	<b>160</b>	<b>274</b>		

The average foreign exchange rates used to convert SEA & Taiwan Segment earnings to Hong Kong dollars are 0.2201 and 0.2406 for 2016 and 0.2307 and 0.2571 for 2017 for Thai Baht and New Taiwan Dollars respectively. Note that in the ACOI variance analysis presented in the body of the presentation 2016 earnings are adjusted for changes in scope and foreign exchange before year on year variance in underlying performance is illustrated

# Australia – Financials



## Australia

	HK\$		Local Currency	
	2017	2016	2017	2016
	HK\$M	HK\$M	A\$M	A\$M
EBITDAF (before items affecting comparability)	5,421	3,756	905	652
Depreciation & Amortisation	(1,335)	(1,320)	(223)	(229)
<b>ACOI</b>				
Customer (Retail)	3,137	2,937	523	510
Energy (Wholesale)	2,778	1,419	463	246
Enterprise (Corporate)	(1,829)	(1,920)	(304)	(333)
<b>Total</b>	<b>4,086</b>	<b>2,436</b>	<b>682</b>	<b>423</b>
Fair value adjustments*	(182)	367	(30)	64
Net finance costs	(124)	(207)	(21)	(36)
Income tax expense	(1,042)	(747)	(174)	(130)
<b>Operating earnings</b>	<b>2,738</b>	<b>1,849</b>	<b>457</b>	<b>321</b>
Reversal of tax provision on acquired derivatives	573	-	94	-
Reversal of provision for generation asset	-	54	-	9
<b>Total earnings</b>	<b>3,311</b>	<b>1,903</b>	<b>551</b>	<b>330</b>

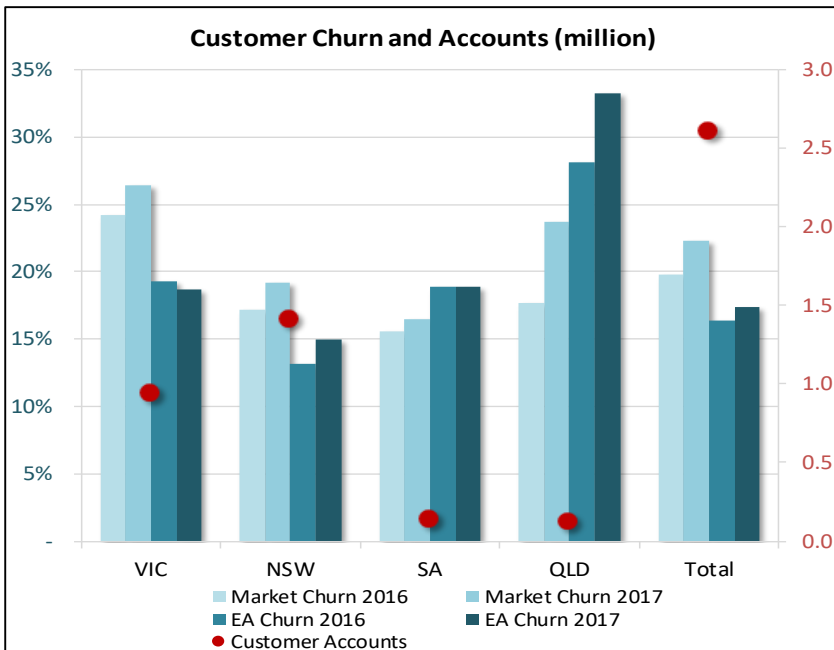
\* Fair value adjustments have been mainly driven by the significant increase in wholesale prices on the contracts under which we have forward sold power from our generation assets as part of our hedging. A loss was recorded in 2017 versus a gain in 2016.

The average foreign exchange rates used to convert Australian Segment earnings to Hong Kong dollars are 5.7615 for 2016 and 5.9958 for 2017. Note that in the ACOI variance analysis presented in the body of the presentation 2016 earnings are adjusted for changes in scope and foreign exchange before year on year variance in underlying performance is illustrated.

# Australia – Customer Operations

Customer Account Numbers (000s)	2017			2016		
	Electricity	Gas	Total	Electricity	Gas	Total
Mass Market	1,738.0	872.2	2,610.2	1,750.2	859.8	2,610.0
Commercial & Industrial	12.8	0.4	13.2	14.9	0.4	15.2
<b>Total Account Numbers</b>	<b>1,750.9</b>	<b>872.5</b>	<b>2,623.4</b>	<b>1,765.0</b>	<b>860.2</b>	<b>2,625.2</b>
<b>Average Mass Market <sup>(1)</sup></b>	<b>1,751.6</b>	<b>869.2</b>	<b>2,620.9</b>	<b>1,769.0</b>	<b>849.0</b>	<b>2,617.9</b>

Sales Volume & Revenue	2017		2016	
	Electricity (TWh)	Gas (PJ)	Electricity (TWh)	Gas (PJ)
Mass Market	10.9	34.7	10.8	34.6
Commercial & Industrial	8.0	23.1	9.2	31.5
<b>Total Sales Volume</b>	<b>19.0</b>	<b>57.8</b>	<b>20.1</b>	<b>66.1</b>
<b>Sales Revenue (A\$m)</b>	<b>4,202.5</b>	<b>1,033.5</b>	<b>3,891.8</b>	<b>1,020.6</b>

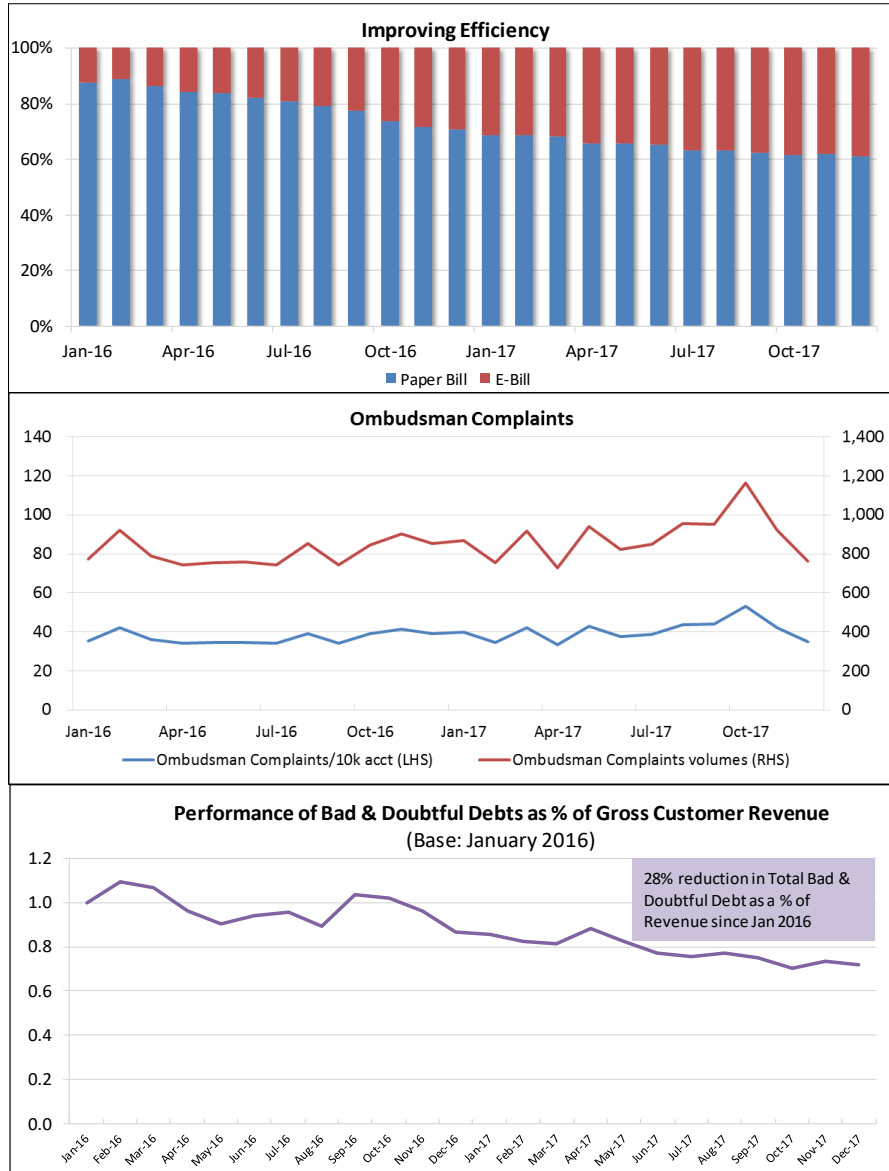


- Mass Market Customer accounts have remained flat as a result of strong competition in the retail market
- Decreased sales volume driven by lower sales to lower margin Commercial & Industrial customers
- EnergyAustralia continued to have below market churn rates (blended across electricity and gas) in the key states of Victoria and New South Wales



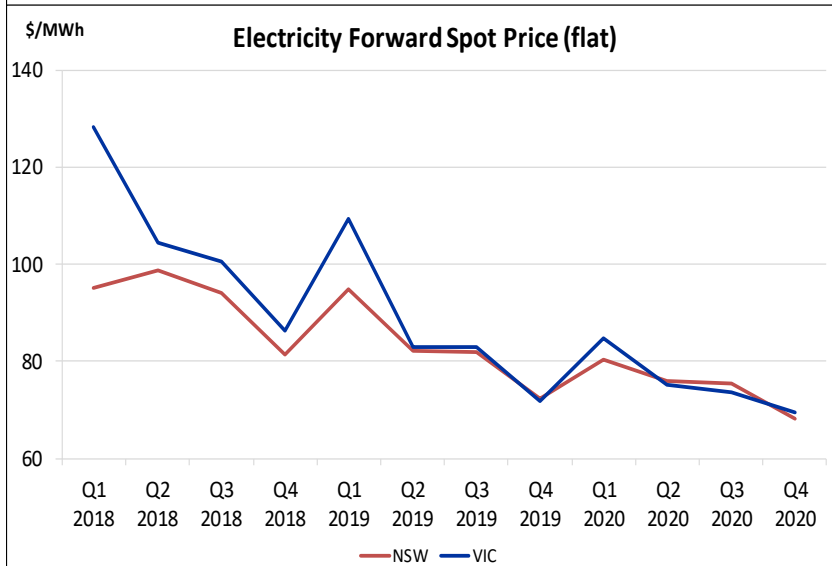
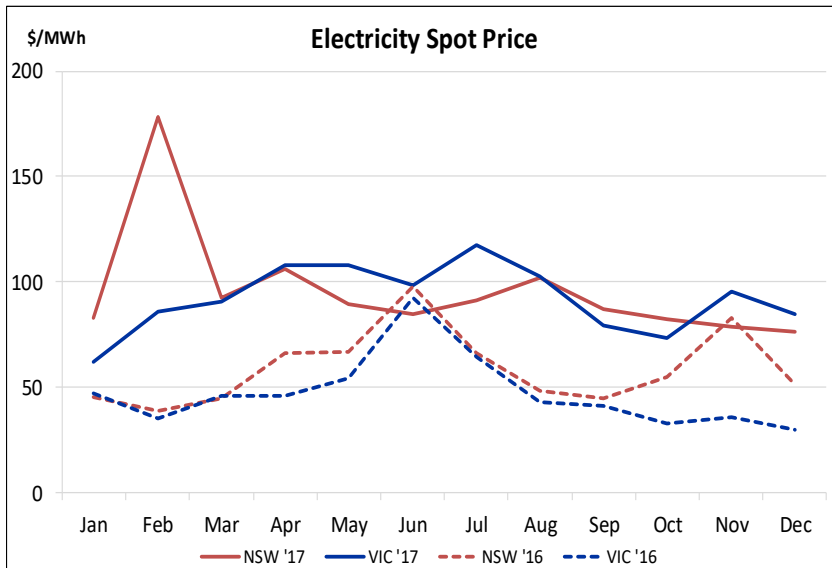
# Australia – Customer Operations

## Improved Customer Experience and Reduced Costs Continued



- EnergyAustralia's overall customer service performance and cost to serve delivered an improved result year on year despite a challenging industry wide year of negative public sentiment over energy affordability. Highlights year on year include:
  - 1 million customer accounts signed up to e-billing
  - Bad Debt as a % of Gross Revenue improved
- The challenges from industry disruption are most evident through the increase in ombudsman complaint volumes
- Results were underpinned through delivery of a strong customer focused program including;
  - Implementation of the new simpler e-bill and proactive customer alerts
  - Enhancements to MyAccount tool enabling greater self service capability for customers
  - Increased support and focus on EnergyAustralia people and partners in the front line serving customers
- EnergyAustralia leads all brands measured by *Global Reviews* in the Energy Retailers Digital Sales Effectiveness benchmark across Australia, UK & Ireland

# Australia – Wholesale Market Conditions



- Wholesale prices remain at historically high levels due to:
  - Closure of Hazelwood at short notice
  - Continued subsidised operation of Portland smelter
  - High peak demand events in New South Wales and Queensland from extreme weather
  - Higher coal and gas prices as legacy contracts expire and as a result of a shift in gas market dynamics
  - Ageing generation fleet with decreasing reliability
  - Costs associated with intermittency of renewables
- The forward spot curve is trending downwards with future committed renewables build increasing energy supply, however this increases intermittency and volatility.
- The Australian Federal Government's proposed National Energy Guarantee (NEG) was announced in October 2017 and aims to balance reliability, affordability and emissions reductions
- If supported by the Council of Australian Governments, the NEG could guide the energy transition.
- In addition, EnergyAustralia is investing in demand response and storage.

# Australia – Value Restoration

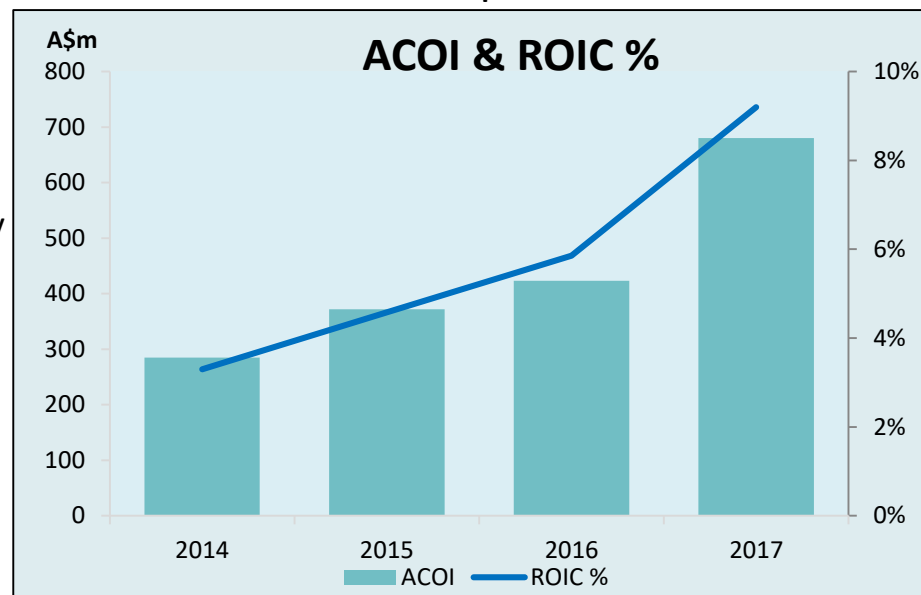
- Our Restore Value program has positive momentum and is ahead of plan

- Customer Business

- Improved customer service
- Reduced cost and enhanced operating efficiency
- Increased the range of products through the NextGen business

- Energy Business

- Optimising asset portfolio to support Customer Business
- Tailwind from increasing wholesale prices expected to benefit future periods
- Underpinning development of 500 MW renewables



A\$m	Actuals			
	2014	2015	2016	2017
ACOI (before tax)	285	372	423	682
ACOI (post-nominal tax)	199	261	296	476
Invested Capital (Avg.) <sup>(1)</sup>	6,037	5,686	5,065	5,178
ROIC <sup>(2)</sup>	3.3%	4.6%	5.9%	9.2%

- EnergyAustralia will continue to drive process efficiency and invest in systems

(1): Average Invested Capital consists of net fixed assets, net working capital, equity investments and intangibles, excluding deferred tax assets & liabilities, financial assets, cash and cash equivalents, and short and long-term debt. Asset values are based on written down and post-impairment positions.

(2): Return on Invested Capital = ACOI (post-nominal tax) / Invested Capital (Average). Note that ACOI is adjusted for nominal tax payable at 30%.

# CLP Group – Generation Portfolio – 31 Dec 2017

19,395 Equity MW and 5,159MW Capacity Purchase (total 24,554MW)

<b>AUSTRALIA</b>	<b>total</b>	<b>4,966MW*</b>
<u>Operational</u>		
Yallourn	1,480 / 1,480	(c)
Mount Piper	1,400 / 1,400	(c)
Hallett	203 / 203	(g)
Ecogen	966 / 966*	(g)
Tallawarra	420 / 420	(g)
Wind Projects	602 / 494*	(w)
Wilga Park	16 / 3	(g)

<b>INDIA</b>	<b>total</b>	<b>2,948 MW</b>
<u>Operational</u>		
Jhajjar	1,320 / 1,320	(c)
Paguthan	655 / 655	(g)
Wind Projects	924 / 924	(w)
Solar Project #	94 / 46	(s)
<u>Under Construction/ Committed</u>		
Solar Project #	6 / 3	(s)

<b>TAIWAN</b>	<b>total</b>	<b>264 MW</b>
<u>Operational</u>		
Ho-Ping	1,320 / 264	(c)

<b>THAILAND</b>	<b>total</b>	<b>21 MW</b>
<u>Operational</u>		
Lopburi Solar #	63 / 21	(s)



<b>HONG KONG</b>	<b>total</b>	<b>7,483MW*</b>
<u>Operational</u>		
Castle Peak	4,108 / 4,108*	(c)
Black Point	2,525 / 2,525*	(g)
Penny's Bay	300 / 300*	(d)
<u>Under Construction/ Committed</u>		
Black Point - D1 (a)	550 / 550*	(g)

<b>MAINLAND CHINA</b>	<b>total</b>	<b>8,872* MW</b>
<u>Operational</u>		
Daya Bay (b)	1,968 / 1,380*	(n)
Yangjiang (c)	4,344 / 738	(n)
Pumped Storage	1,200 / 600*	(h)
Fangchenggang I & II	2,580 / 1,806	(c)
SZPC	3,060 / 900	(c)
Guohua & Shenmu	7,690 / 1,355	(c)
Hydro Projects	509 / 489	(h)
Wind Projects	1,354 / 835	(w)
Solar Projects #	275 / 234	(s)
<u>Under Construction/ Committed</u>		
Yangjiang (c)	2,172 / 369	(n)
Wind Projects	149 / 149	(w)
Solar Project #	17 / 17	(s)

Fuel Source: (c) – coal-fired (g) – gas-fired (w) – wind (h) – hydro (n) – nuclear (d) – diesel (s) – solar

• Station Name Gross MW / CLP Equity MW

\* including capacity purchase

# Solar projects in AC output

- (a) A new gas-fired generation unit of 550MW at Black Point Power Station is targeted to be put in commercial operation before 2020.
- (b) Agreement has been reached to increase proportion of supply to Hong Kong to about 80% from 2015 to 2018, with the remainder continuing to be sold to Guangdong.
- (c) Acquisition of 17% equity stake in Yangjiang Nuclear was completed on 12 December 2017. As at 31 December 2017, four units are in operation and two are under construction.

# CLP Group – Renewable Generation Portfolio – 31 Dec 2017

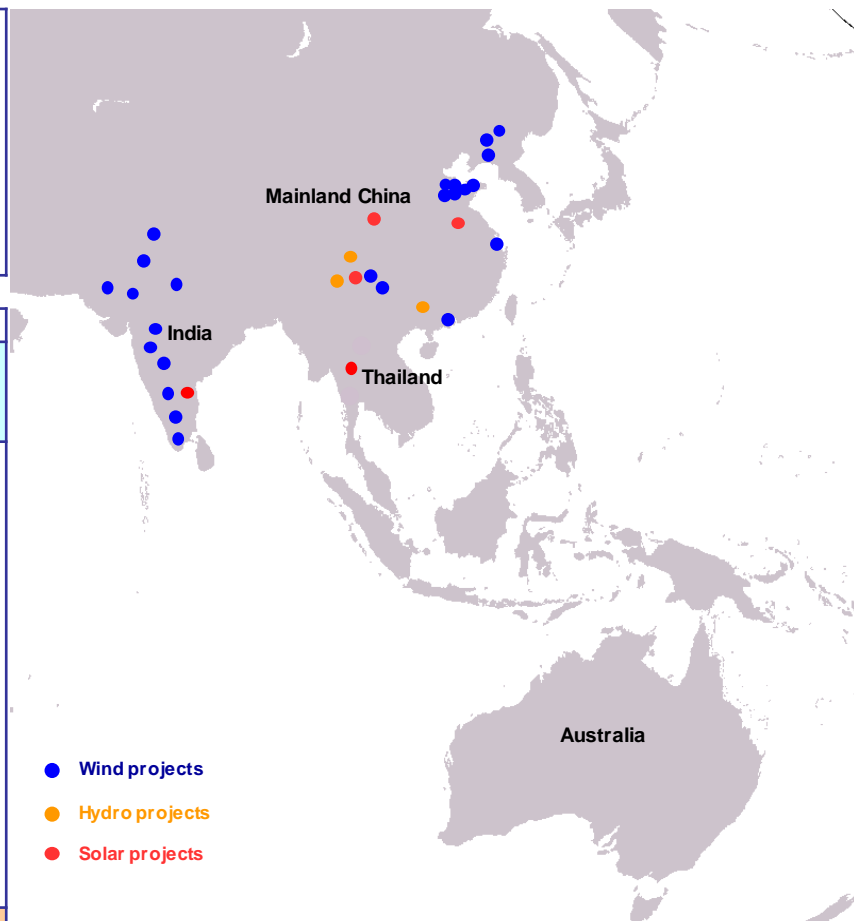
2,751 Equity MW and 461MW Capacity Purchase (total 3,211MW)

- 13% of CLP total generation portfolio

<b>AUSTRALIA</b>	<b>total</b>	<b>494 MW*</b>
<b>Operational</b>		
Waterloo	131 / 56*	
Cathedral Rocks	66 / 33	
Boco Rock	113 / 113*	
Taralga	107 / 107*	
Mortons Lane	20 / 20*	
Gullen Range	166 / 166*	

<b>INDIA</b>	<b>total</b>	<b>973 MW</b>
<b>Operational</b>		
Wind	924 MW	
Solar	46 MW	
Khandke	50 / 50	
Samana I & II	101 / 101	
Saundatti	72 / 72	
Theni I	50 / 50	
Theni II	50 / 50	
Harapanahalli	40 / 40	
Andhra Lake	106 / 106	
Sipla	50 / 50	
Bhokrani	102 / 102	
Mahidad	50 / 50	
Jath	60 / 60	
Tejuva	101 / 101	
Chandgarh	92 / 92	
Veltoor Solar # (a)	94 / 46	
<b>Under Construction/ Committed</b>		
Solar	3 MW	
Veltoor Solar # (a)	6 / 3	

<b>THAILAND</b>	<b>total</b>	<b>21 MW</b>
<b>Operational</b>		
Lopburi Solar #	63 / 21	



• **Station Name**      **Gross MW / CLP Equity MW**  
 \* including capacity purchase  
 # Solar projects in AC output

<b>MAINLAND CHINA</b>	<b>total</b>	<b>1,723 MW</b>
<b>Operational</b>		
Wind <sup>(b)(c)</sup>	835 MW	
Hydro	489 MW	
Solar	234 MW	
Weihai I & II	69 / 31	
Nanao II & III	60 / 15	
Shuangliao I & II	99 / 48	
Datong	50 / 24	
Laizhou I	41 / 18	
Changling II	50 / 22	
Guohua Wind	395 / 194	
Qujiagou	49 / 12	
Mazongshan	49 / 12	
Qian'an I & II	99 / 99	
Penglai I	48 / 48	
Chongming I	48 / 14	
Laiwu I & II <sup>(d)</sup>	100 / 100	
Xundian I	50 / 50	
Sandu I	99 / 99	
CLP Laizhou I	50 / 50	
Jiangbian Hydro	330 / 330	
Huaiji Hydro	129 / 110	
Dali Yang_er Hydro	50 / 50	
Jinchang Solar #	85 / 43	
Xicun I & II Solar #	84 / 84	
Sihong Solar #	93 / 93	
Huai'an Solar #	13 / 13	
<b>Under Construction/ Committed</b>		
Wind	149 MW	
Solar	17 MW	
Sandu II	99 / 99	
CLP Laizhou II	50 / 50	
Lingyuan Solar #	17 / 17	

- (a) CLP India has the option to acquire the remaining 51% in the future. 94 MW of Veltoor Solar became operational in 2H2017.  
 (b) Changdao Wind (12MW) ceased operation in 2H2017.  
 (c) Share transfer agreement to divest interest in CGN Wind (314MW) was signed in December 2017.  
 (d) Laiwu II commenced operation in October 2017.



# CLP Group – Generation Capacity\* by Fuel Mix – 31 Dec 2017

24,554 MW Attributable to CLP Group

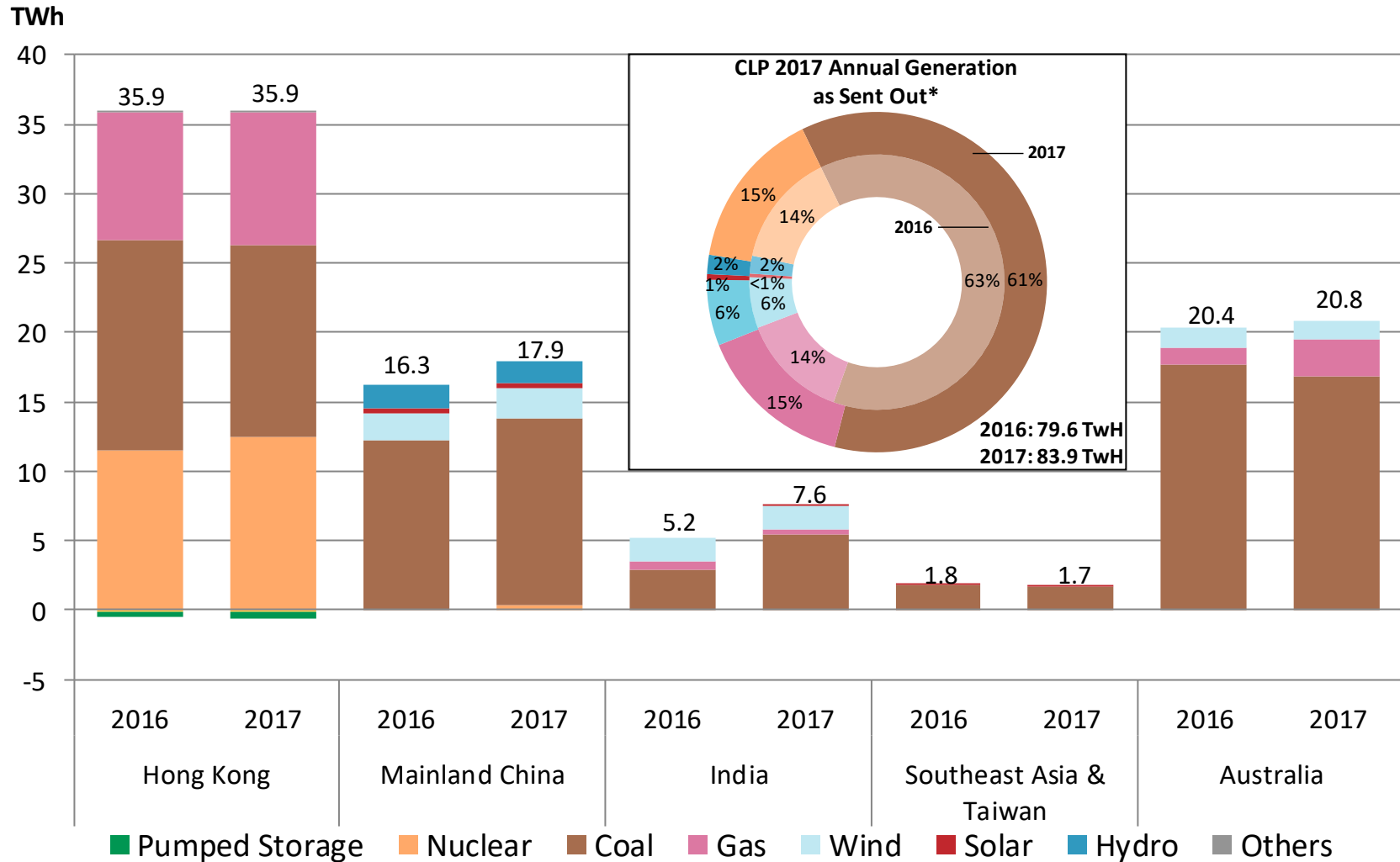
Capacity by Energy Type	Total MW		Operational MW		Under construction / Committed MW	
		%		%		%
	(a) + (b)		(a)		(b)	
Coal	12,633	51%	12,633	51%	-	-
Gas	5,322	22%	4,772	19%	550	2%
Nuclear	2,488	10%	2,118	9%	369	2%
Wind	2,401	10%	2,253	9%	149	1%
Hydro	489	2%	489	2%	-	-
Solar	321	1%	301	1%	20	<1%
Others	900	4%	900	4%	-	-
Total operating	24,554	100%	23,467	96%	1,088	4%

\* Equity basis and including capacity purchase arrangements

Note: Individual items and totals are rounded to the nearest appropriate number. Some totals may not add down the page due to rounding of individual components

# CLP Group – Energy Sent Out – 2017

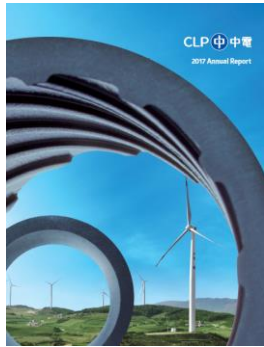
## Energy Sent Out\*



\* Equity basis and including capacity purchase arrangements

# Additional Resources

**Annual Report\***  
2017



**Sustainability Report\***  
2017



**Interim Report**  
2017



**Introductory Pack**  
February 2018



**Analyst Presentation**  
August 2017



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\* To be published in March 2018

CLP Holdings

**Thank you**