

CLP Holdings 2018 Annual Results Analyst Briefing

25 February 2019

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# Agenda



**Performance Overview** 



**Group Financial Performance** 



Performance by Business Units



**Business Trends and Outlook** 



**Questions and Answers** 



**Appendices** 



# Focused strategy delivers 5<sup>th</sup> year of earnings growth

- ✓ Continued dependable performance from Hong Kong business
  - New 15-year SoC from 1 October 2018
  - Development Plan lays foundation for investment in cleaner and smarter energy
- ✓ Further growth from Mainland China and overseas
  - ✓ Higher contributions from low carbon generation in Mainland China
  - New partnership to pursue growth and diversification in India
  - ✓ Value restored in Australia, new opportunities largely depend on policy evolution
- ✓ Transition into a Utility of the Future well engaged, enabled by innovation initiatives and technology
- ✓ Strong cashflow and strong financial structure



# Financial strength and investments lay foundation for growth

Operating Earning	s —		Operating Earnings Per S	hare ———
HK\$13,982	?m +5	5% 1	HK\$5.53	+5%
Fourth Interim Div	ridend —		Total Interim Dividend	
HK\$1.19	+	4% 👚	HK\$3.02	+4% 1
Total Earnings —			Total Earnings Per Share	
HK\$13,550	m -	5% 👢	HK\$5.36	-5%
Credit Ratings —			Capital Investment and L	everage
	S&P	Moody's		
CLP Holdings	Α	A2	SoC Capex	HK\$8.4bn
CLP Power	A+	A1	Other Capex	HK\$3.6bn
CAPCO	AA-	A1	Net debt to total capital	25.5%
EnergyAustralia	BBB+	-		



# Strong asset performance with 10% increase in electricity sent out

## **Safety**

Total recordable injury rate 0.25

-0.4

## Reliability in Hong Kong (1)

Average minutes lost pa (rolling 3 years)

Excluding Typhoon Mangkhut 1.44 -0.13 Including Typhoon Mangkhut 10.29 +8.72

### **Customer Accounts**

Hong Kong

2.597m +41k

Australia

2.550m

-73k

### **Electricity Sales**

Hong Kong

34.2 TWh stable

Australia

19.1 TWh stable

### **Generation Performance**

Electricity sent out (2)

92.3 TWh

+10.1%

## **Generation Capacity** (2)

In operation 22.9 GW -0.6

Non-carbon Emitting (3) 5.4 GW +0.2

Committed/In construction 0.8 GW -0.3

- (1) Unplanned customer minutes lost average of the past 36 months
- (2) Equity basis as well as long-term capacity and energy purchase arrangements
- (3) Non-carbon emitting includes wind, hydro, solar and nuclear





# Higher operating earnings with strong overseas performance

HK\$M	2018	2017	Change
Revenue	91,425	92,073	1%
Operating Earnings			
Hong Kong electricity and related activities	8,785	9,198	4%
Local electricity business	8,558	8,863	•
Sales to Guangdong	35	65	
PSDC and Hong Kong Branch Line	192	270	
Outside Hong Kong	6,199	4,783	30%
Mainland China	2,163	1,238	_
India	572	647	
Southeast Asia and Taiwan	162	160	
Australia	3,302	2,738	
Other earnings and unallocated items	(1,002)	(674)	
Operating Earnings	13,982	13,307	<b>1</b> 5%
Items affecting comparability#	(432)	942	
<u>Total Earnings</u>	13,550	14,249	5%



<sup>#</sup> Items affecting comparability in 2018 represented the provision for Paguthan's deemed generation receivables and revaluation gain on investment property 2017 included the reversal of tax provision for acquired derivatives at EnergyAustralia and revaluation gains on investment properties

# Adjusted Current Operating Income (ACOI)

HK\$M	2018	2017	Change
Operating Earnings (Attributable to CLP)	13,982	13,307	5%
Exclude:			
Fair value adjustments	(68)	(138)	
Net finance costs #	(2,107)	(2,278)	
Income tax expense	(4,014)	(3,353)	
Non-controlling interests	(827)	(849)	
ACOI	20,998	19,925	<b>1</b> 5%

### 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 negative fair value adjustments on energy derivative contracts in EnergyAustralia

### Net finance costs #

 Lower finance costs mainly attributable to favourable fair value movements of financial derivative instruments

### Income tax expense

In line with increase in profit in particular Australia

### Non-controlling interests

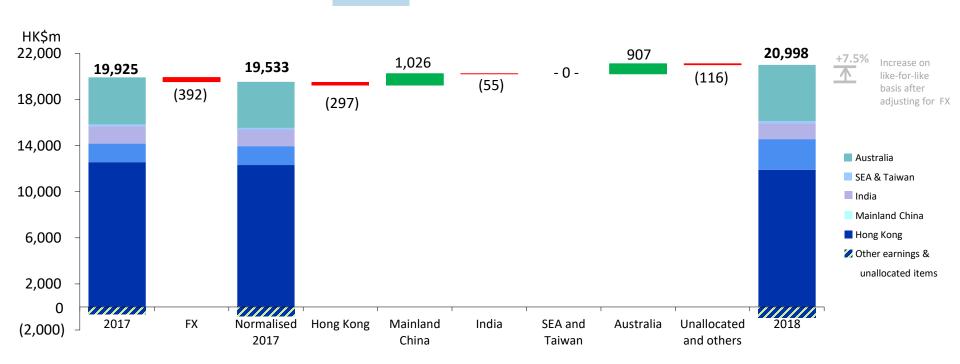
Mainly CSG's 30% share of CAPCO



<sup>#</sup> Included the distribution to perpetual capital securities holders

# Adjusted Current Operating Income (ACOI)

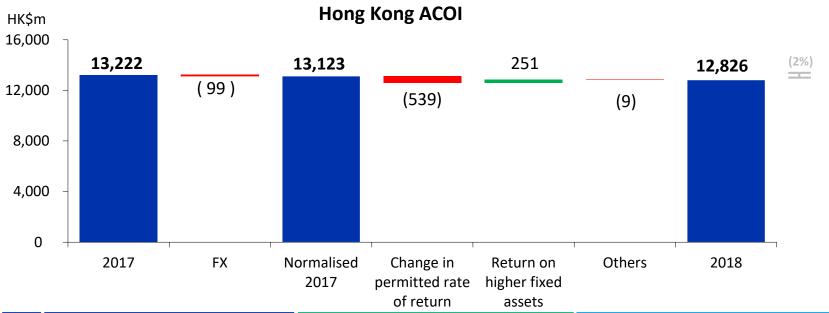
нк\$м	2018	2017	
Hong Kong electricity and related activities	12,826	13,222	New Scheme of Control commenced with lower permitted return
Mainland China	2,670	1,610 Growth in earnings from non-carbon portfolio	
India	1,385	1,511	Lower thermal earnings partially offset by new solar contribution
Southeast Asia and Taiwan	161	156	Stable performance at Ho Ping and NED
Australia	4,885	4,086	High wholesale prices and sent out with competitive retail market
Other earnings and unallocated items	(929)	(660)	FX impact, higher centralised innovation and development costs
Total	20,998	19,925	5.4% increase (or +7.5% normalized for FX)







## New Scheme of Control commenced with lower permitted rate of return





### **Operational Performance**

High supply reliability despite impact of typhoon

Local sales increased 1.5%

Lower sales to Mainland after sales contract to Shekou ended in June 2018

Construction of CCGT unit D1 in progress

Received Environmental Permit for offshore LNG terminal. Significant progress made on LNG supply and FSRU vessel arrangements

Feed-in Tariff for solar introduced with over 1,400 applications received



### **Financial Performance**

Lower earnings from SoC due to reduced permitted rate of return from 1 October 2018 partially offset by increase in net fixed assets

Capex spent in 2018

- T&D + Retail capex ~HK\$4.4 bn
- Generation capex ~HK\$4.5 bn

Others relating to sales to Guangdong, Hong Kong Branch Line and PSDC



### Outlook

Lower SoC return for full year in 2019

Deliver new 5-year Development Plan for 2018-2023

Pursue renewable energy and energy efficiency & conservation initiatives of the new SoC

Continue construction of D1, and start planning for D2

Proceed with the offshore LNG terminal and finalise contracting for LNG supply and FSRU vessel arrangement



### Growth in earnings from non-carbon portfolio HK\$m

3,000 31 2,670 114 +62% 896 2,500 (15)885 2,000 34 1,644 1,610 1,864 1,500 Renewables Nuclear 1,000 Thermal Others 500 39 0 (118)FX Others 2017 Normalised Nuclear Renewables **Thermal** 2018 (500)2017

**Mainland China ACOI** 

## **Operational Performance**

### Nuclear

- Yangjiang: Unit 5 started operation in July
- Daya Bay: Steady output
- Reliable performance of both plants through Typhoon Mangkhut

#### Renewables

- Existing projects: Solid underlying performance with less grid curtailment delivers record output
- Lingyuan Solar commissioned in July 2018 and performing well

### Thermal

Reliable operation, higher demand at FCG



### **Financial Performance**

#### Nuclear

- Full year contribution from Yangjiang
- Nuclear now 2/3 of China earnings

#### Renewables

- Higher earnings from existing projects and less grid curtailment
- Contribution from new projects

#### Thermal

• Impact of higher sent out more than offset by high coal prices and energy transition costs, while tariffs remained low



### **Outlook**

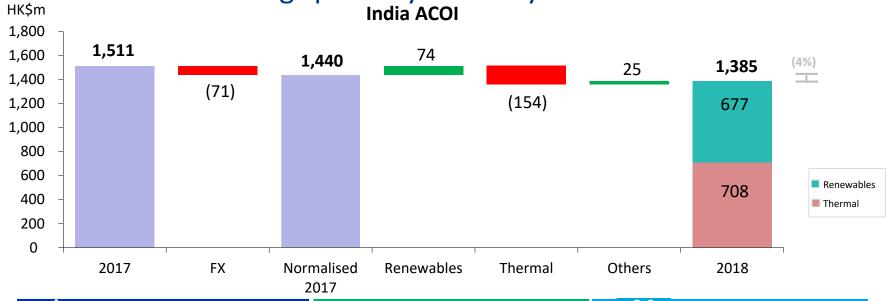
Further increase of contribution from noncarbon generation

- Complete construction of Yangjiang Unit 6
- Continue to look for value adding renewable energy opportunities

High coal price and volume competition to continue with lower output and margin anticipated



## Lower thermal earnings partially offset by new solar contribution





Higher wind resource and generation

**Operational Performance** 

• Veltoor Solar fully commissioned in February 2018

### Thermal

- Record generation at Jhajjar. Despite record coal deliveries, supply was insufficient to fully meet demand, constraining generation at times
- Paguthan PPA came to an end on 10 December 2018



### **Financial Performance**

#### Renewables

- Contribution from Veltoor Solar
- Stable wind contribution

#### Thermal

- Jhajjar: Non-repeat of 2017 coal stock gain. O&M costs higher on increased output
- Lower revenue from Paguthan due to expiry of PPA

#### Others

• Non-recurring items from 2017



### **Outlook**

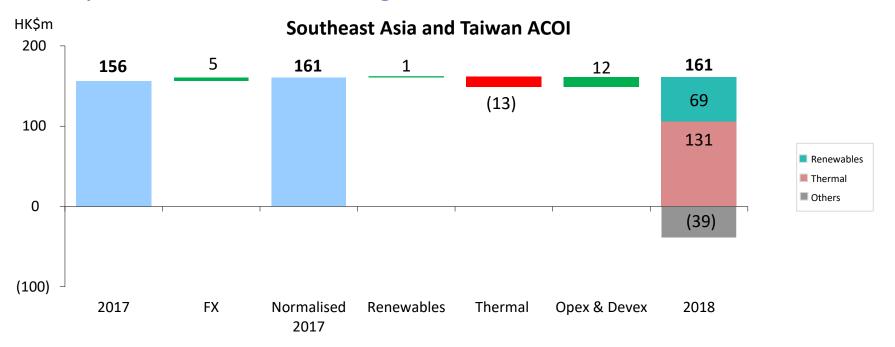
Pursue diversified expansion opportunities with new partner CDPQ

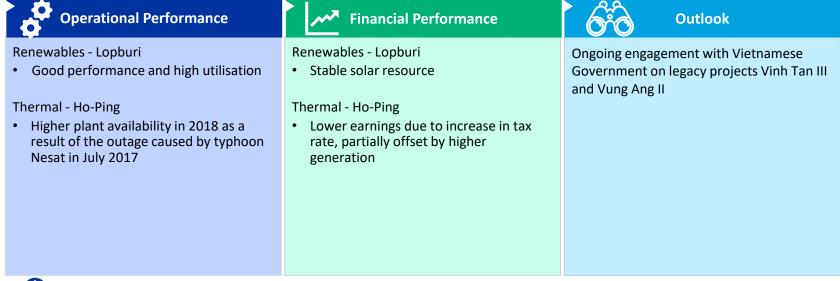
Maintain operational excellence and strengthen business foundations

Explore new commercial possibilities for operations in Paguthan



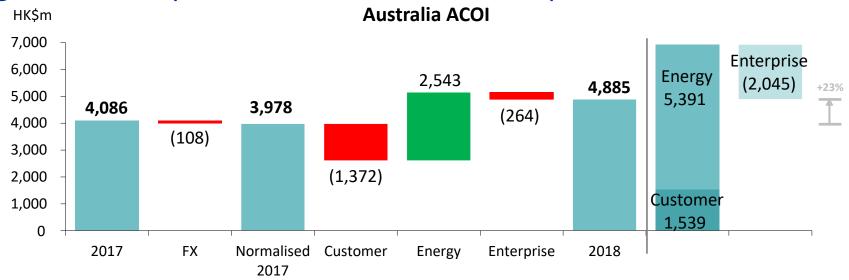
# Stable performance at Ho Ping and NED







# High wholesale prices and sent out with competitive retail market



## Operational Performance

#### Customer

- Heightened competition stimulated by government interventions and media attention
- Churn below market average, customer accounts lower
- Did not pass on all cost increases to our customers

### Energy

- Effective management of generation fleet with 20.6 TWh sent out
- Increased generation at Mt Piper with better coal certainty
- Integration of Ecogen Energy

### ,,,,,,

### **Financial Performance**

#### Customer

- Gross margin reduced on high energy costs
- Cost to serve higher on increased regulatory costs and supporting customers in hardship

#### Energy

Higher realised wholesale energy prices increased generation margins

### Enterprise

 Investment in Customer processes and experience



### Outlook

Focus on asset availability with high wholesale prices

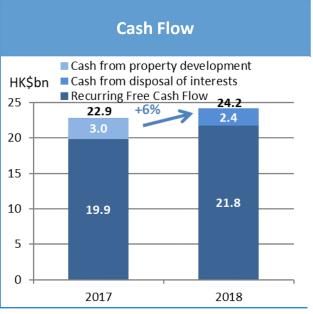
Support market reforms which are in the best interests of our customers

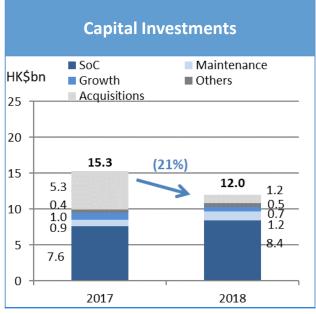
Continue focus on operational excellence to lower Customer segment operating costs

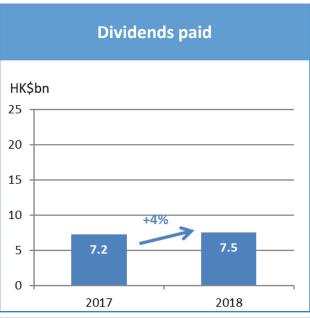
Evaluate new investment opportunities and continue to integrate flexible capacity to facilitate supply/demand balance in the market

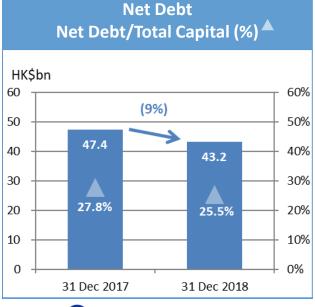


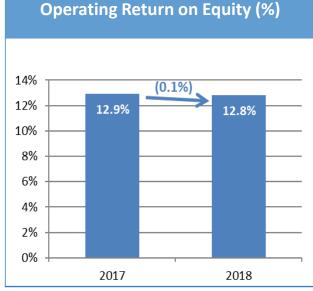
# Financial strength supports growth options

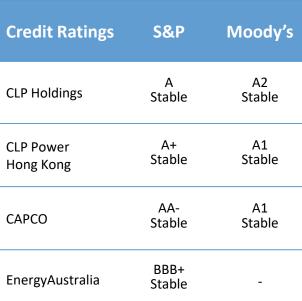














# New Development Plan addresses growing demand & supply reliability



CLP中電

# New initiatives moving Hong Kong towards a smarter & greener future

- ✓ Green initiatives to encourage community participation in renewable energy
  - ✓ New Feed-in Tariff programme established over 1,400 applications received
  - ✓ Issuance of Renewable Energy Certificates commenced in January 2019
- ✓ Smart meters installation programme commenced in November 2018
- Other initiatives include the New CLP Eco Building Fund, the Community Energy Saving Fund and energy audits





# The Utility of the Future



Providing customers with data driven insights and energy management tools

Customers empowered with greater visibility & control of energy usage



Investing in smart grid infrastructure, smart meters & services combined with AI

Smarter, more sustainable, more connected cities

Developing grid edge services such as electric transportation and intelligent street lighting

Safer, cleaner, lower carbon intensity cities



Deploying new technologies to decarbonise the grid and manage complex systems

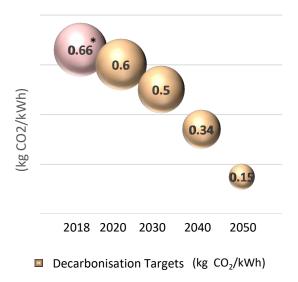
Lower carbon emissions and mastery of complex grid systems



# Continuing our commitment to the Energy Transition

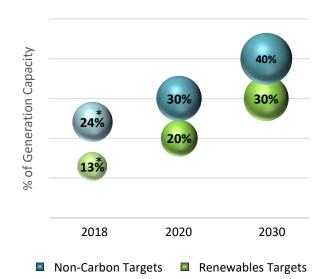
### **Decarbonisation Targets**

2050 decarbonisation target now set at 0.15 kg CO<sub>2</sub>/kWh



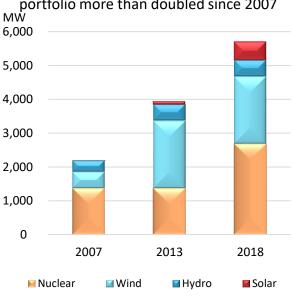
### **Clean Energy Targets**

Milestones for renewables and non-carbon capacity increased



### **Our Portfolio**

CLP Group's non-carbon emitting generation portfolio more than doubled since 2007





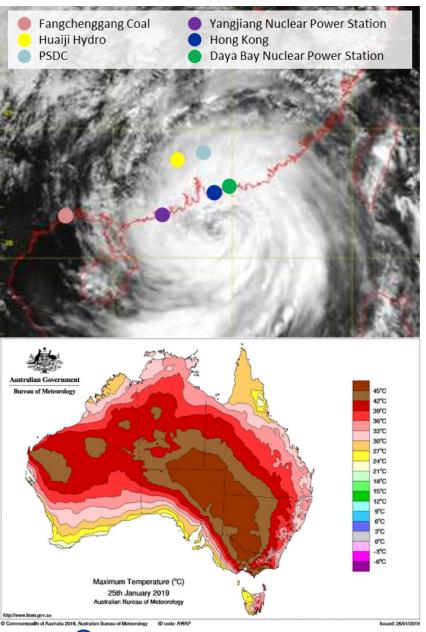
Continue to increase the share of renewables & non-carbon emitting generation and reduce the emissions intensity of our generation



<sup>\*</sup> Equity basis as well as long-term capacity and energy purchase arrangements



# Strengthening resilience against extreme weather events



- With climate change we expect the frequency and intensity of extreme weather events to increase
- Recent examples include:
  - Severe Typhoon Mangkhut, the most powerful storm to hit Hong Kong & Guangdong in decades
  - The extreme heat wave impacting most of Australia in January 2019
- Managing through these events requires ongoing investment to enhance the reliability of generation units, strengthen the resilience of our networks and continually improve our response system to minimise impacts to our customers
- Data science and predictive methods have been adopted to help facilitate mitigation measures against such extreme weather events

# Looking forward

# Hong Kong

Deliver new Development Plan & SoC initiatives to become a greener & smarter city

### Australia

Pursue opportunities to bring reliable and affordable energy to customers



## Climate Vision 2050

Pursue energy transition targets



in Mainland China with a focus in the Greater Bay Area



# Utility of the Future

Implement innovation initiatives



Continue to pursue new value adding opportunities



### India

Broaden portfolio along the energy supply chain under the new partnership









# CLP Group – Financial Highlights – Additional Information

Financial Information	2018	2017	Change
Operating earnings (HK\$M)	13,982	13,307	+5%
Total earnings (HK\$M)	13,550	14,249	-5%
Operating earnings per share (HK\$)	5.53	5.27	+5%
Total earnings per share (HK\$)	5.36	5.64	-5%
Dividends per share (HK\$)			
First to third interim dividend	1.83	1.77	+3%
Fourth interim dividend	1.19	1.14	+4%
Total interim dividends	3.02	2.91	+4%
Capex (HK\$M) - Cash basis			
SoC Capex	8,430	7,598	+11%
Other Capex	3,615	7,672	-53%
Leverage			
Net Debt (HK\$M)	43,172	47,411	-9%
Net Debt/Total Capital (%)	25.5%	27.8%	-2%



# CLP Group – Operating Highlights – Additional Information

Operating Information	2018	2017	Change
Safety (Total Recordable Injury Rate)	0.25	0.29	-0.4
Electricity sent out (TWh) (1)	91.9	83.9	+9.5%
Generation Capacity (GW) (1)			
Total in Operation	22.9	23.5	-0.6
Non-Carbon Emitting (2)	5.4	5.2	+0.2
Committed / Under Construction	0.8	1.1	-0.3
Customer Accounts (Thousand)			
Hong Kong	2,597	2,556	+41
Australia	2,550	2,623	-73
Hong Kong local electricity sales (TWh)	33.7	33.2	+0.5
Reliability in Hong Kong (minutes lost pa) (3)	10.29	1.57	+8.72

<sup>(1)</sup> Equity basis as well as long-term capacity and energy purchase arrangements

<sup>(3)</sup> Unplanned customer minutes lost - average of the past 36 months. The increase was mainly due to the impact of Severe Typhoon Mangkhut in 2018



<sup>2)</sup> Non-carbon emitting includes wind, hydro, solar and nuclear

# CLP Group – Reconciliation of Operating Earnings and ACOI

нк\$м	Hong Kong electricity and related	Mainland China	India	ndia SEA & Taiwan		Other earnings & unallocated items	Group total
2018 Annual results							
<b>Operating Earnings</b> (as per Segment Information in Annual Report)	8,501	2,355	572	162	3,302	(910)	13,982
Allocation PSDC & HK Branch Line	192	(192)	-	-	-	-	-
Allocation of Other earnings	92	-	_	_	-	(92)	-
<b>Operating Earnings</b> (as per Managem Reporting in this presentation pack)	ent <b>8,785</b>	2,163	572	162	3,302	(1,002)	13,982
Add back							
Non-controlling interests	805	10	12	-	-	-	827
Net finance costs/(income) *	1,240	256	534	(1)	24	54	2,107
Income tax expense	1,978	241	267	-	1,509	19	4,014
Fair value adjustments #	18	-	-	-	50	-	68
ACOI	12,826	2,670	1,385	161	4,885	(929)	20,998
2017 Annual results							
Operating Earnings (as per Segment Information in Annual Report)	8,863	1,508	647	160	2,738	(609)	13,307
Allocation PSDC & HK Branch Line Allocation of Other earnings	270 65	(270)	-	-	-	- (65)	- -
Operating Earnings (as per Managem Reporting in this presentation pack)	ent <b>9,198</b>	1,238	647	160	2,738	(674)	13,307
Add back							
Non-controlling interests	837	13	(1)	-	-	-	849
Net finance costs/(income) *	1,269	231	656	(4)	124	2	2,278
Income tax expense	1,960	128	209	-	1,042	14	3,353
Fair value adjustments #	(42)				182	(2)	138
ACOI	13,222	1,610	1,511	156	4,086	(660)	19,925

<sup>\*</sup> Including net fair value loss/(gain) on debt related derivative financial instruments, and other net exchange loss/(gain) on financing activities and distribution to perpetual capital securities holders

<sup>#</sup> Including net fair value loss/(gain) on non-debt derivative financial instruments relating to transactions not qualifying as hedges and ineffectiveness of cash flow hedges



CLP Group – Cash Flow and Financial Structure

нк\$м	2018	2017	Cash Flow
Cash Flow			<ul> <li>Higher cash inflow mainly due to the strong underlying performance</li> </ul>
EBITDAF	28,571	27,662	across the portfolio
Less: Items affecting comparability	432	(369)	Cash from divestment represents proceeds received from the sale of
Recurring EBITDAF	29,003	27,293	interests in CLP India and CGN Wind
Less: Movement in SoC items	(985)	(1,291)	Capital Investments
Less: Movement in working capital & others	(1,434)	(2,496)	- • HK\$8.4 billion SoC capex related to enhancement of transmission and
Funds from operations	26,584	23,506	distribution networks and generation facilities including construction
Less: Tax paid	(2,819)	(2,234)	of CCGT in Hong Kong
Less: Net finance costs paid	(2,243)	(2,139)	Growth capex mainly included our investments in solar project in
Less: Maintenance capex	(1,210)	(994)	India
Add: Dividends from joint ventures & an associate	1,454	1,728	Maintenance capex mainly represented capital works on Yallourn and
Recurring Free Cash Flow	21,766	19,867	Mount Piper in Australia
Cash from divestment	2,391	-	Acquisitions of Ecogen in April (HK\$1 billion) and remaining 49%
Cash from property development	-	3,000	interest of Jinchang Solar in May (HK\$0.2 billion) (2017: Acquisition of Yangjiang Nuclear)
Capital Investments (1)			Net Debt/Total Capital
• SoC capex (2)	8,430	7,598	<ul> <li>Decrease in net debt to total capital mainly related to strong financial</li> </ul>
• Maintenance capex (2)	1,210	994	performance and proceeds received from the sale of interests in CLP
• Growth capex (2)	687	946	India and CGN Wind
• Others <sup>(3)</sup>	515	414	(1) Capital investments include fixed assets, leasehold land and land use rights,
Acquisitions of businesses			investment properties, intangible assets, investments in and advances to joint ventures and associates, and acquisition of businesses/assets
•	1,203 12,045	5,318 <b>15,270</b>	. (2) Capital expenditure on fixed assets and leasehold land and land use rights are further analysed into
Total	12,045	15,270	<ul> <li>SoC capex - capital expenditure related to the SoC business</li> </ul>
Dividend paid	7,503	7,226	<ul> <li>Growth capex - capital expenditure for additional generation capacity</li> <li>Maintenance capex - capital expenditure other than the above</li> </ul>
End of period	2018	2017	(3) Capital investments on intangibles assets and investments in and advances to joint
Net Debt <sup>(4)</sup> (HK\$M)	43,172	47,411	ventures and associates  (4) Net of bank balance, cash and other liquid funds
Net Debt/Total Capital (%)	25.5%	27.8%	31

# CLP Group – Financial Obligations at a Glance

	31 Dec 2018	31 Dec 2017
HONG KONG	нк\$М	нк\$М
Total borrowings of CLPH, CLPP, CAPCO & PSDC	43,247	44,954
Minus: Bank balances and liquid funds	(4,437)	(5,964)
Net Debt	38,810	38,990
OVERSEAS		
Total borrowings of EnergyAustralia, India and Mainland China subsidiaries (non-recourse to CLPH)	12,051	12,387
Minus: Bank balance and liquid funds	(7,689)	(3,966)
Net debt	4,362	8,421
CONSOLIDATED total borrowings of CLP Group	55,298	57,341
Minus: Consolidated bank balance and liquid funds	(12,126)	(9,930)
Consolidated Net debt	43,172	47,411
Total Debt/Total Capital	30.4%	31.8%
Net Debt/Total Capital	25.5%	27.8%



Decrease in net debt to total capital mainly related to strong financial performance and proceeds received from the sale of interests in CLP India and CGN Wind

# CLP Group – Credit Ratings

	<b>CLP Holdings</b>		CLP	CLP Power		APCO	EnergyAustralia
	S&P	Moody's	S&P	Moody's	S&P	Moody's	S&P
Long term Rating							
Foreign Currency	Α	A2	A+	A1	AA-	A1	BBB+
Outlook	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Local Currency	Α	A2	A+	A1	AA-	A1	BBB+
Outlook	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Short term Rating							
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 May and June 2018, S&P and Moody's affirmed all the credit ratings of CLPH, CLP Power Hong Kong and CAPCO with stable outlooks.

In August 2018, S&P affirmed the credit rating of EnergyAustralia with stable outlook.



# CLP Group – Highlights of Financing Activities

For more information on CLP
Climate Action Finance Framework

### **CLP Holdings**

- Ample liquidity in the Group with undrawn facilities of HK\$24 billion and HK\$12.1 billion bank balances as at 31 December 2018.
- CLP Holdings refinanced HK\$2.5 billion loan facilities with three banks at preferential interest rates.



### Scheme of Control

- New financing obtained at extremely cost effective interest rates. Arranged a HK\$1 billion 15-year fixed rate private placement bond and HK\$2.7 billion two to five-year bank loan facilities at attractive interest rates.
- Arranged RMB800 million (swapped back to HK\$1 billion) offshore bank loan at all-in interest rate below Hong Kong Interbank Offered Rate to refinance other existing debt of higher cost.
- Our financial management is held in high regard in the industry. In May 2018, the arrangement of CAPCO's
  HK\$5.7 billion term loan facilities for funding of the new Combined Cycle Gas Turbine at Black Point Power Station
  was recognised as the Hong Kong Power Deal of the Year at the Triple A Asia Infrastructure Awards 2018 organised by
  The Asset magazine. This comprised HK\$1.4 billion, 15-year export credit facility arranged in March 2017 and HK\$4.3
  billion, five-year commercial loan facility arranged in January 2017.

### **Mainland China**

Continued financing at competitive terms. Arranged RMB450 million (HK\$512 million) 14 and 15-year project loan
facilities for two renewable energy projects and a RMB300 million (HK\$342 million) offshore RMB bank loan.

### India

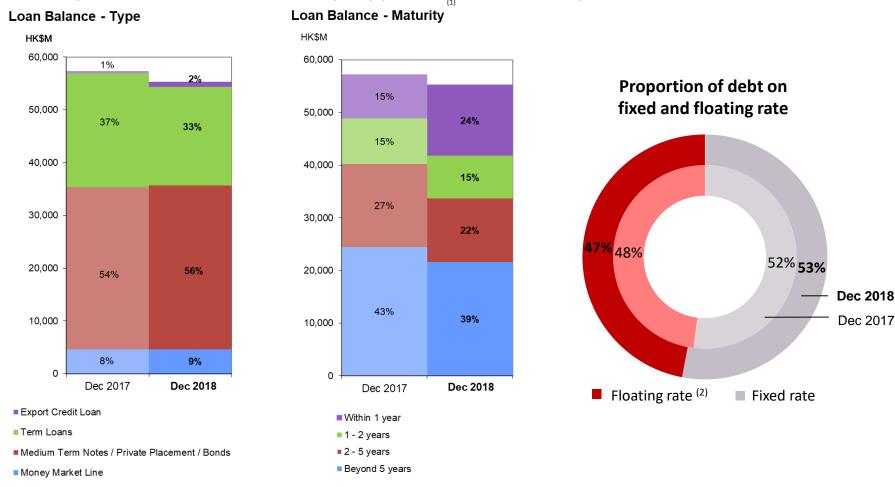
• Lower interest margins through refinancing or negotiating with lenders. CLP India arranged US\$19.5 million (HK\$153 million) and Rs 7.1 billion (HK\$795 million) bank loan facilities of between one to 18 years in tenor at competitive rate to refinance existing debt of renewable projects. The US dollar loan proceeds were swapped back to Indian Rupees to mitigate foreign exchange rate risk.

### **EnergyAustralia**

- **Stronger operating cash flow and more surplus funds.** EnergyAustralia early repaid US\$30 million (HK\$235 million) private placement bond to reduce finance costs.
- Re-arranged a A\$500 million (HK\$2.9 billion) syndicated guarantee facility in March 2018 at more favourable costs.
- Extended the maturity date of an existing A\$300 million (HK\$1.7 billion) working capital facility by three years to June 2021.



# CLP Group – Loan Balances by Type and Maturity



- 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 2018, the additional interest payment is around HK\$261m per annum
- 3) CLP continues to obtain debt (re)financing at very cost effective interest rates. Some representative examples in 2018 are highlighted on page 34 ("CLP Group Highlights of Financing Activities")

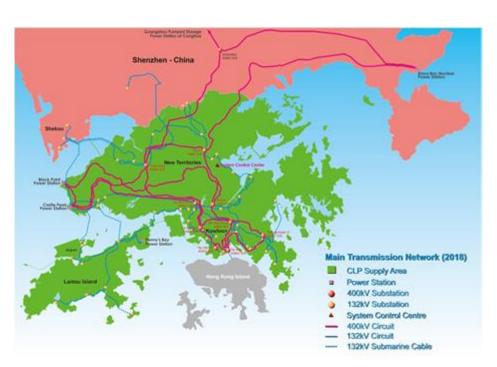


# Hong Kong – Growing Business Scale

Generation	Transmission	Distribution	Retail
8,963 MW of installed capacity	> 15,800 km of transmission and high voltage distribution lines	232 primary and > 14,600 secondary substations	33,662 GWh sold and 2.60 million customer accounts

### **During 2018:**

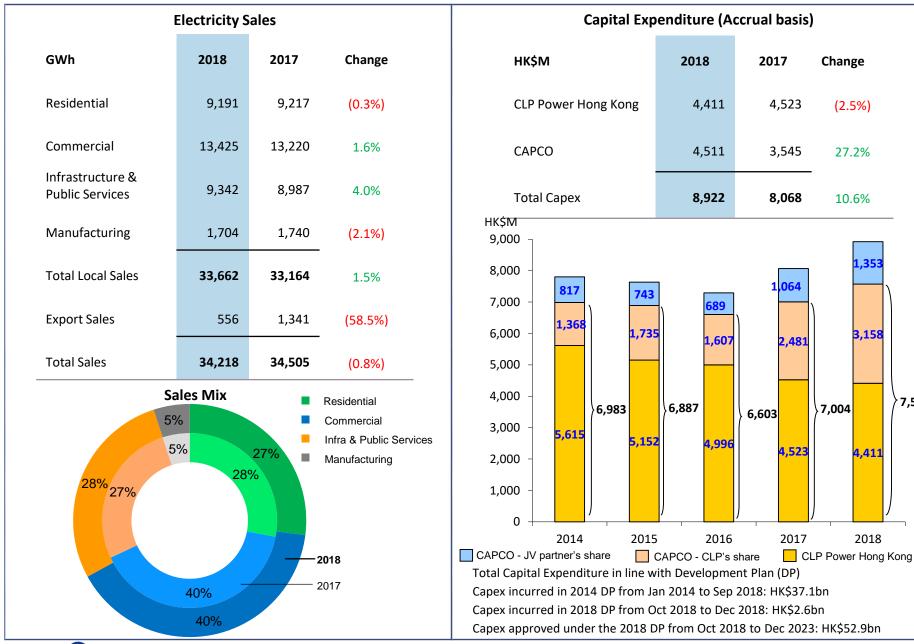
- Local electricity sales increased 1.5% to 33,662 GWh as compared with 2017
- No. of customer accounts increased by 41k to 2,597k as compared with 2017
- Major infrastructure projects ongoing
- Construction of a new 550MW gas-fired generation unit at Black Point Power Station in progress for commissioning the unit before 2020
- The second and third unit of gas turbine upgrade project at Black Point Power Station completed with a total of 50MW generation capacity added
- Commissioned 1 new 132kV substations to provide power supply to a data centre in Tseung Kwan O
- Over 180 km of new transmission and high voltage distribution lines & over 200 new substations added
- Upgraded flagship shop in Mong Kok to bring in new interactive and personalised retail experience



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





1,353

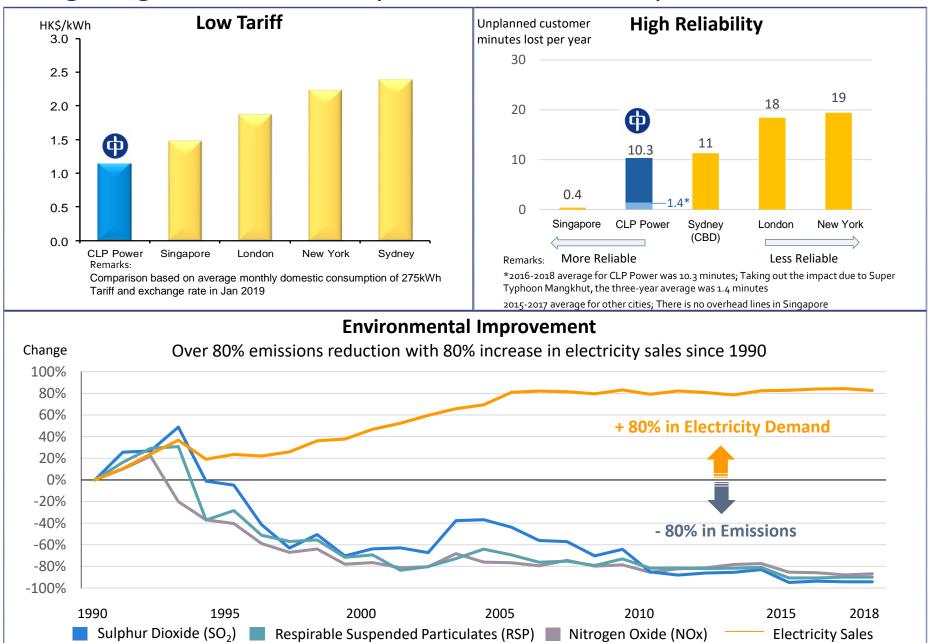
3,158

4,411

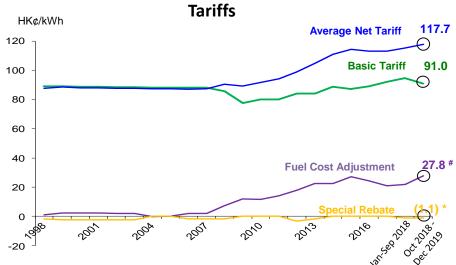
2018

7,569

## Hong Kong – Tariff, Reliability & Environmental Improvement

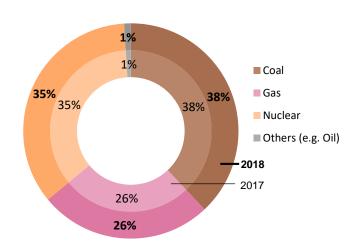


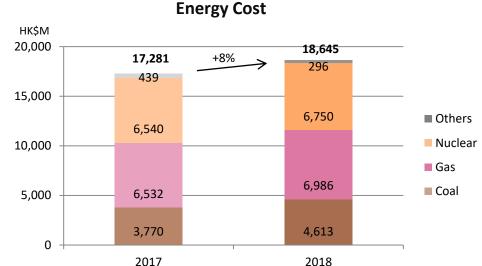
## Hong Kong – Tariff, Energy Cost, Fuel Mix and Gas Volume

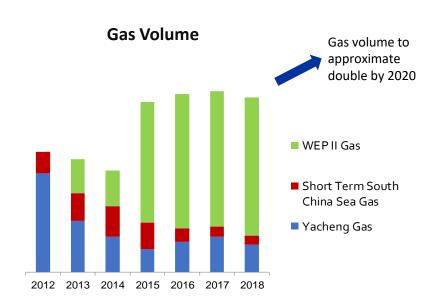


<sup>\*</sup> CLP Power Hong Kong has provided customers with a Rent and Rates Special Rebate of 1.1 cents per unit from January 2018 to mid-February 2019, rebating to customers the refunds received from the Government in relation to CLP Power's claims against the Government's overcharged rent and rates. # Commencing 1 October 2018, the Fuel Cost Adjustment is automatically adjusted on a monthly basis to reflect changes in actual price of fuel used.

## Fuel Mix (based on MWh generated/purchased)









## Mainland China – Financials (HK\$)



HK\$M	Operating/	Total Earnings	ACOI		
	2018	2017	2018	2017	
Renewables	530	441	885	755	
- Wind	314	245	452	352	
- Hydro	93	100	211	228	
- Solar	123	96	222	175	
Nuclear	1,720	913	1,864	964	
- Daya Bay	920	879	968	930	
- Yangjiang	800	34	896	34	
Thermal	36	45	39	53	
- Shandong	13	58	16	63	
- Guohua	15	67	15	70	
- Fangchenggang	8	(80)	8	(80)	
Operating and development expenditure	(123)	(161)	(118)	(162)	
Operating earnings /ACOI	2,163	1,238	2,670	1,610	
Total earnings	2,163	1,238			

The average foreign exchange rates used to convert Mainland China Segment earnings to Hong Kong dollars are 1.15711 for 2017 and 1.18249 for 2018. Note that in the ACOI variance analysis presented in the body of the presentation 2017 earnings are adjusted for changes in scope and foreign exchange before year on year variance in underlying performance is illustrated.



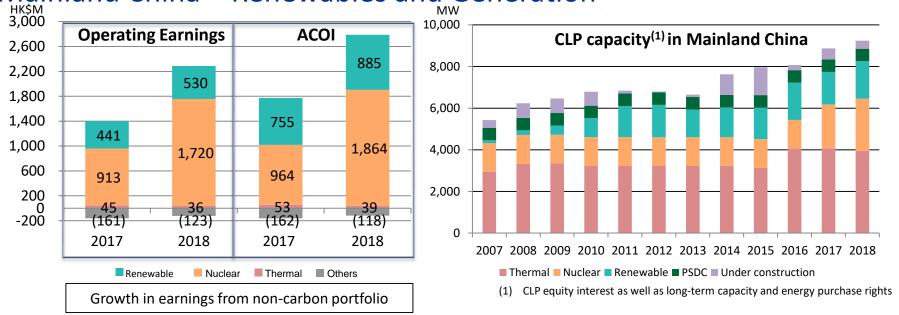
## Mainland China – Financials (Local Currency)



RMB'M	Operating/To	tal Earnings	ACOI		
	2018	2017	2018	2017	
Renewables	448	381	748	653	
- Wind	265	212	382	304	
- Hydro	79	86	178	197	
- Solar	104	83	188	152	
Nuclear	1,454	789	1,577	833	
- Daya Bay	778	760	819	804	
- Yangjiang	676	29	758	29	
Thermal	31	39	33	46	
- Shandong	11	50	13	54	
- Guohua	13	58	13	61	
- Fangchenggang	7	(69)	7	(69)	
Operating and development expenditure	(137)	(162)	(133)	(163)	
Operating earnings /ACOI	1,796	1,047	2,225	1,369	
Total earnings	1,796	1,047			



## Mainland China – Renewables and Generation



- The economy continued to grow steadily and the operating environment remains challenging from high coal price and reforms in macroeconomic policies in the energy sector. There was strong power demand due to unusually cold weather in 2018
- Higher dispatch at Fangchenggang from strengthening economic growth in Guangxi Zhuang Autonomous Region and easing competition from hydro power generation due to low rainfall. Efficiency and emission standards enhanced for Fangchenggang Unit 1 and 2 for compliance with Mainland China's 2020 emissions requirements
- First full year earnings from Yangjiang in 2018
- Less grid curtailment for wind in northeast & solar in northwest (average grid curtailment down from 8% in 2017 to 3% in 2018)
- Total receivables of HK\$972 million relating to the unpaid Renewables National Subsidy (2017: HK\$611 million). There has been continuous payments and no history of default
- Business development opportunities
  - Acquisition of additional 49% interest in Jinchang Solar in May 2018
  - Commercial operation of Lingyuan Solar (17MW) in Liaoning in July 2018
  - Completed construction and commissioning tests of CLP Laizhou II Wind (49.5MW) in Shandong
  - Completed the Share Transfer Agreement of Meizhou Solar (36MW) in Guangdong in January 2019



## Mainland China – Market sales in 2018



Province	Projects (Equity MW)
Yunnan	Xundian Wind (50MW) Xicun Solar (84MW) Dali Yang_er Hydro (50MW)
Guangxi	FCG thermal (1,806MW)
Sichuan	Jiangbian Hydro (330MW)
Gansu	Jinchang Solar (85MW)
Inner Mongolia	Zhungeer thermal (257MW)
Liaoning	Suizhong thermal (564MW) Mazongshan Wind (12MW) Qujiagou Wind (12MW)
Jilin	Qian'an Wind (99MW) Changling II Wind (22MW) Datong Wind (24MW) Shuangliao Wind (48MW)
Tianjin	Panshan thermal (207MW)
Hebei	Sanhe thermal (220MW)
Shandong	Shiheng thermal (370MW)
Guangdong	Yangjiang Nuclear (923MW)

Market sales are prevailing in various forms in different provinces in China. Overall around 43% of our share of generation volumes were under market sales in 2018. It is expected that market sales will continue to increase going forward.



## India – Financials

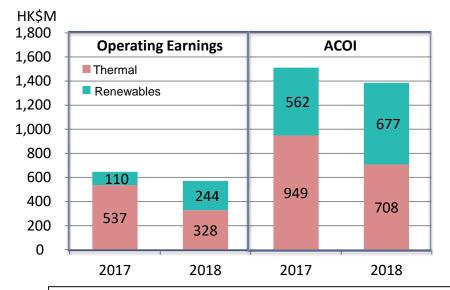


	Н	К\$	Local Currency		
	2018	2017	2018	2017	
	нк\$м	нк\$М	Rs M	Rs M	
Thermal (Jhajjar)	474	676	4,135	5,633	
Thermal (Paguthan)	234	273	2,041	2,275	
Renewables	677	562	5,905	4,683	
ACOI	1,385	1,511	12,081	12,591	
Thermal (Jhajjar)	102	315	890	2,625	
Thermal (Paguthan)	226	222	1,971	1,850	
Renewables	244	110	2,128	916	
Operating earnings	572	647	4,989	5,391	
Provision for Paguthan's deemed generation receivables	(450)	-	(3,796)	-	
Total earnings	122	647	1,193	5,391	

The average foreign exchange rates used to convert Indian Segment earnings to Hong Kong dollars are 0.12001 for 2017 and 0.11464 for 2018. Note that in the ACOI variance analysis presented in the body of the presentation 2017 earnings are adjusted for changes in scope and foreign exchange before year on year variance in underlying performance is illustrated.



### India – Renewable Generation



Higher renewables ACOI in 2018 reflects contribution from Veltoor solar, higher wind resources and one time cancellation costs of Yermala wind development in 2017

#### Introduction of CDPQ as a 40% shareholder of CLP India

- In September 2018, CLP introduced Caisse de dépôt et placement du Québec (CDPQ), one of Canada's largest fund managers, as a strategic 40% shareholder of CLP India. CLP remains 60% shareholder
- The new partnership brings the strategic backing and resources that will allow CLP India to take advantage of the opportunities arising from the decarbonisation and consolidation of India's generating industry
  - We will focus on growing CLP India's non-carbon generating business, particularly in renewables and transmission. The partnership provides strong financial resources for growth from the business's existing solid platform
    - The transaction was completed on 28 December 2018
- CLP has been investing in renewable energy in India for over a decade
- The renewable generation portfolio in India has been diversified with our first solar project Veltoor (100/29MW) fully commissioned in February 2018. In 4Q2018 two new solar projects Gale (50/15MW) and Tornado (20/12MW) were acquired from Suzlon
- India's economic growth has softened recently and demand growth has moderated. However, we remain confident of the long term prospects of India's power industry
- CLP India has entered into an agreement with PTC India Limited, to sell power generated by Paguthan on the power exchange if we are called to do so
- We will continue to explore new opportunities in renewable generation and other growth opportunities along the energy supply chain including participating in transmission and distribution opportunities

## Southeast Asia & Taiwan – Financials



	Н	K\$	Local Currency		
	2018	2017	2018	2017	
	нк\$м	нк\$М	M	M	
ACOI					
Thermal	131	142	NT\$503	NT\$554	
Renewables	69	65	THB284	THB281	
Operating expenditure	(11)	(13)	-	-	
Development expenditure	(28)	(38)	-	-	
Total	161	156			
Operating earnings					
Thermal	131	142	NT\$503	NT\$554	
Renewables	69	65	THB284	THB281	
Operating expenditure	(11)	(13)	-	-	
Development expenditure	(27)	(34)	-	-	
Total	162	160			

The average foreign exchange rates used to convert SEA & Taiwan Segment earnings to Hong Kong dollars are 0.2307 and 0.2571 for 2017 and 0.2424 and 0.2600 for 2018 for Thai Baht and New Taiwan Dollars respectively. Note that in the ACOI variance analysis presented in the body of the presentation 2017 earnings are adjusted for changes in scope and foreign exchange before year on year variance in underlying performance is illustrated



## Australia – Financials



	Н	K\$	<b>Local Currency</b>		
	2018	2017^	2018	2017^	
	HK\$M	нк\$М	A\$M	A\$M	
EBITDAF (before items affecting comparability)	6,566	5,421	1,125	905	
Depreciation & Amortisation	(1,681)	(1,335)	(288)	(223)	
ACOI					
Customer (Retail)	1,539	2,990	264	499	
Energy (Wholesale)	5,391	2,925	923	487	
Enterprise (Corporate)	(2,045)	(1,829)	(350)	(304)	
Total	4,885	4,086	837	682	
Fair value adjustments	(50)	(182)	(9)	(30)	
Net finance costs	(24)	(124)	(4)	(21)	
Income tax expense	(1,509)	(1,042)	(258)	(174)	
Operating earnings	3,302	2,738	566	457	
Reversal of tax provision on acquired derivatives	-	573	-	94	
Total earnings	3,302	3,311	566	551	

<sup>^ 2017</sup> ACOI has been restated to reflect a change in organisational structure where Business Sales Group (BSG) customers have been reclassified from Customer to Energy.

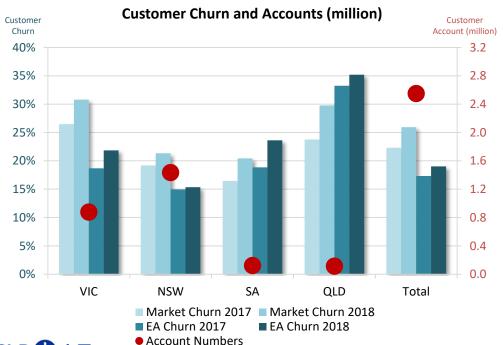
The average foreign exchange rates used to convert Australian Segment earnings to Hong Kong dollars are 5.9958 for 2017 and 5.8376 for 2018. Note that in the ACOI variance analysis presented in the body of the presentation 2017 earnings are adjusted for changes in scope and foreign exchange before period on period variance in underlying performance is illustrated.



## Australia – Customer Operations

Customer Account Numbers		2018		2017		
(000s)	Electricity	Gas	Total	Electricity	Gas	Total
Mass Market	1,671.6	866.0	2,537.6	1,738.0	872.2	2,610.2
Commercial & Industrial	12.2	0.3	12.5	12.8	0.4	13.2
Total Account Numbers	1,683.8	866.4	2,550.1	1,750.9	872.5	2,623.4
Weighted Average Mass Market (1)	1,697.9	866.1	2,564.0	1,751.6	869.2	2,620.9

Sales Volume & Revenue	20	18	2017		
Sales volume & Revenue	Electricity (TWh)	Gas (PJ)	Electricity (TWh)	Gas (PJ)	
Mass Market	10.4	33.3	10.9	34.7	
Commercial & Industrial	8.7	10.2	8.0	23.1	
Total Sales Volume	19.1	43.5	19.0	57.8	
Sales Revenue (A\$m)	4,482.0	1,008.5	4,202.5	1,033.5	

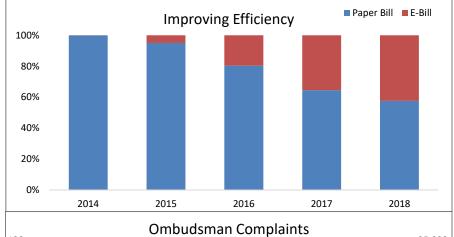


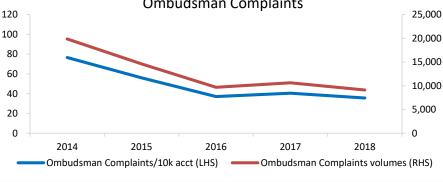
- Mass Market Customer accounts have declined, predominantly in the first half, in the face of political interventions and an intensely competitive retail market
- Decreased gas sales volume to Commercial & Industrial customers due to lower gas availability
- EnergyAustralia continues to have below market churn rates in the key states of Victoria and New South Wales

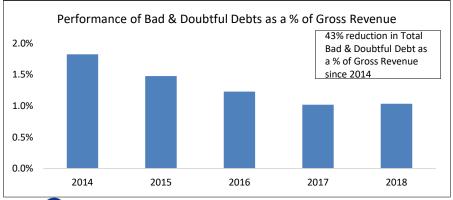


## Australia – Customer Operations

Customer Focussed; Leadership in an Industry with Low Trust



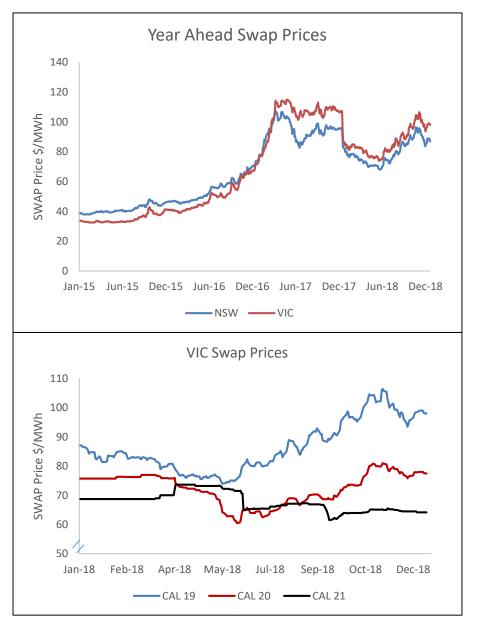




- Ongoing market competition, regulatory changes and affordability have adversely impacted our cost to serve and reduced customer trust in the industry. In light of this, our focus is on:
  - Improving customer satisfaction and demonstrating leadership in the industry
  - Redesigning customer experience through simplification, efficiency and digitisation
  - Retaining existing customers and testing new customer propositions
- Ombudsman complaint numbers for EnergyAustralia have decreased despite disruptive conditions across the industry, although complaint resolution has been slower
- Bad and doubtful debt as a percentage of gross revenue has remained stable
- EnergyAustralia has supported our customers through:
  - Not passing on to customers the majority of cost increases to limit the impact on retail tariff changes
  - Providing a 15% discount on electricity and gas usage for concession customers on standing offers
  - Use of SMS reminders for customers with pay on time discounts and removal of late payment fees from February 2019



## Australia – Wholesale Market Conditions



- Recent forward electricity price increase driven by increasing fuel costs, reducing hydro storage and new entrant project delays
- Longer term electricity prices are trading lower from more renewables, including rooftop solar, reducing prices in the middle of the day
- Flexible generation is increasingly required to ensure the grid can reliably support the large renewable investment
- Focus on portfolio alignment to changing market:
  - Acquired Ecogen Energy
  - Invested in two utility scale batteries
  - Expanding demand response and grid solutions
  - Evaluating investments in flexible capacity including pumped storage and NSW gas peaking

#### Australia – Value Creation

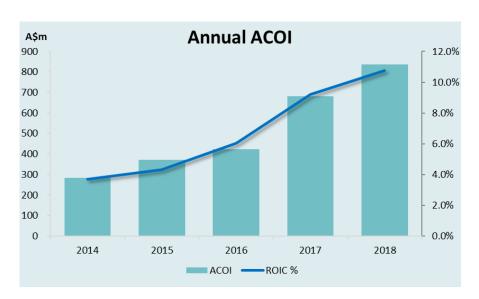
#### With Value Restoration delivered successfully, EnergyAustralia is investing in Value Creation

#### Value Restoration

- Improved customer service with higher transactional Net Promoter Score
- Optimising asset portfolio to support the Customer Business including battery storage, flexible capacity and demand response
- Underpinned development of around 500MW renewables

#### Value Creation

- Investing in processes and systems to simplify customer engagement
- Evaluating flexible capacity opportunities to support the integration of renewable generation



A\$m	Actuals						
	2014	2015	2016	2017	2018		
ACOI (before tax)	285	372	423	682	837		
ACOI (post-nominal tax)	199	261	296	476	586		
Invested Capital (Avg.) (1)	6,037	5,686	5,065	5,178	5,453		
ROIC (2)	3.3%	4.6%	5.9%	9.2%	10.7%		

EnergyAustralia will continue to drive process efficiency and improved customer experience

(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 2018

## 19,108 Equity MW and 4,597MW Long Term Purchase (total 23,705MW)

AUSTRALIA	total	5,128	BMW*	
<u>Operational</u>				
Yallourn	1,480	/ 1,480	(c)	
Mount Piper	1,400	/ 1,400	(c)	
Hallett	203	/ 203	(g)	
Newport	500	/500	(g)	
Jeeralang	440	/ 440	(g)	Mainland
Tallawarra	420	/ 420	(g)	China
Wind Projects	580	/ 493*	(w)	India Hong Taiwan
Solar Project #	212	/ 189*	(s)	none.
Wilga Park	16	/3	(g)	Thailand Kong
INDIA (a)	total	1,796	5 MW	
<u>Operational</u>				
Jhajjar	1,320	-	(c)	
Paguthan		/ 393	(g)	
Wind Projects		/555	(w)	
Solar Project #	170	/ 56	(s)	
TAIWAN	total	264	MW	
<u>Operational</u>				Australia
Ho-Ping	1,320	/ 264	(c)	
	total	21	MW	
ΤΗΔΙΙ ΔΝΩ				
THAILAND Operational				

HQNG KONG	total	7,543N	1W*
<u>Operational</u>			
Castle Peak	4,108 /	4,108*	(c)
Black Point (b)	2,575 /	2,575*	(g)
Penny's Bay	300 /	300*	(o)
<b>Under Construction</b>			
Black Point - D1	550 /	550*	(g)
Energy-from-Waste	10 /	10*	(o)

MAINLAND CHINA	total	8,954*	MW
<u>Operational</u>			
Daya Bay	1,968	/ 1,577*	(n)
Yangjiang	5,430	/ 923	(n)
Pumped Storage	1,200	/ 600*	(o)
Fangchenggang I & II	2,580	/ 1,806	(c)
SZPC	3,060	/ 900	(c)
Guohua	7,470	/ 1,248	(c)
Hydro Projects	509	/ 489	(h)
Wind Projects	1,354	/ 835	(w)
Solar Projects #	292	/ 292	(s)
<b>Under Construction</b>			
Yangjiang	1,086	/ 185	(n)
Wind Projects	100	/ 100	(w)

- Station Name Gross MW / CLP Equity MW
- \* including long-term capacity and energy purchase # Solar projects in AC output

- (a) Introduction of CDPQ as a strategic 40% shareholder of CLP India on 28 December 2018.
- (b) Gas turbine upgrade of Black Point Power Station Unit C6 & C8.

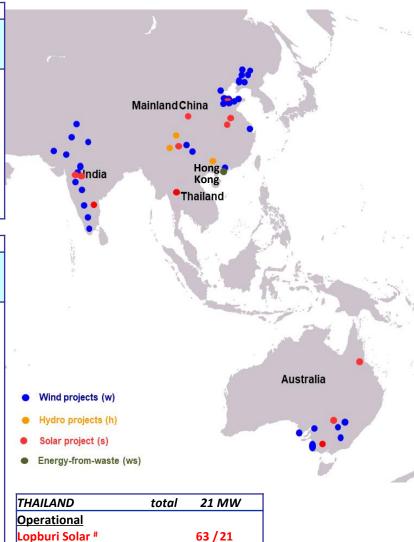


# CLP Group — Renewable Generation Portfolio — 31 Dec 2018 2,387 Equity MW and 652MW Long Term Purchase (total 3,039MW)

- 13% of CLP total generation portfolio

AUSTRALIA	total	681 MW*
<u>Operational</u>		
Wind		493 MW
Solar		189 MW
Waterloo		111 / 56*
Cathedral Rocks		64/32
Boco Rock		113 / 113*
Taralga		107 / 107*
Mortons Lane		20 / 20*
Gullen Range		166 / 166*
Gannawarra Solar #		50 / 50*
Ross River Solar #		116 / 93*
Manildra Solar #		46 / 46*

INDIA	total	611 MW
<u>Operational</u>		
Wind		555 MW
Solar		56 MW
Khandke		50/30
Samana I & II	1	01/60
Saundatti		72 / 43
Theni I		50/30
Theni II		50/30
Harapanahalli		40 / 24
Andhra Lake	1	L <b>06 / 64</b>
Sipla		50/30
Bhakrani	1	02 / 61
Mahidad		50/30
Jath		60/36
Tejuva	1	01/60
Chandgarh		92 / 55
Veltoor Solar #	1	L <b>00 / 2</b> 9
Gale Solar #		50 / 15
Tornado Solar #		20 / 12



HONG KONG	total	10 MW	
Under Construction			
<b>West New Territories</b>	Landfill	10/10	

MAINLAND CHINA	total	1,716 MW
<u>Operational</u>		
Wind		835 MW
Hydro		489 MW
Solar		292 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		50 / 12
Mazongshan		50 / 12
Qian'an I & II		99 / 99
Penglai I		48 / 48
Chongming I		48 / 14
Laiwu I & II		99 / 99
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 # (a)		85 / 85
Xicun I & II Solar#		84 / 84
Sihong Solar #		93 / 93
Huai'an Solar #		13 / 13
Lingyuan #		17 / 17
Under Construction		
Wind		100 MW
CLP Laizhou II		50 / 50
Laiwu III		50 / 50



Gross MW / CLP Equity MW Station Name \* including long-term capacity and energy purchase

<sup>#</sup> Solar projects in AC output

## CLP Group – Generation Capacity\* by Fuel Mix – 31 Dec 2018

## 23,508 MW Attributable to CLP Group

Capacity by Energy Type	Total MW (a) + (b)	%	Operational MW (a)	%	Under construction / Committed MW (b)	%
Coal	11,997	51%	11,997	51%	-	-
Gas	5,084	22%	4,534	19%	550	2%
Nuclear	2,685	11%	2,500	11%	185	1%
Wind	1,982	9%	1,882	8%	100	1%
Hydro	489	2%	489	2%	-	-
Solar	558	2%	558	2%	-	-
Others	910	4%	900	4%	10	0%
Total	23,705	100%	22,861	96%	844	4%

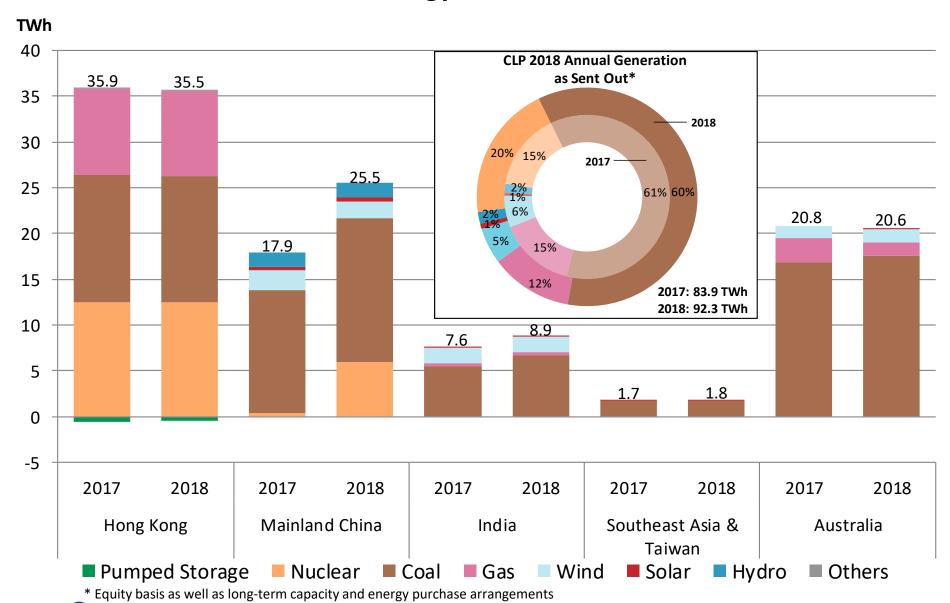
<sup>\*</sup> Equity basis as well as long-term capacity and energy purchase arrangements

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



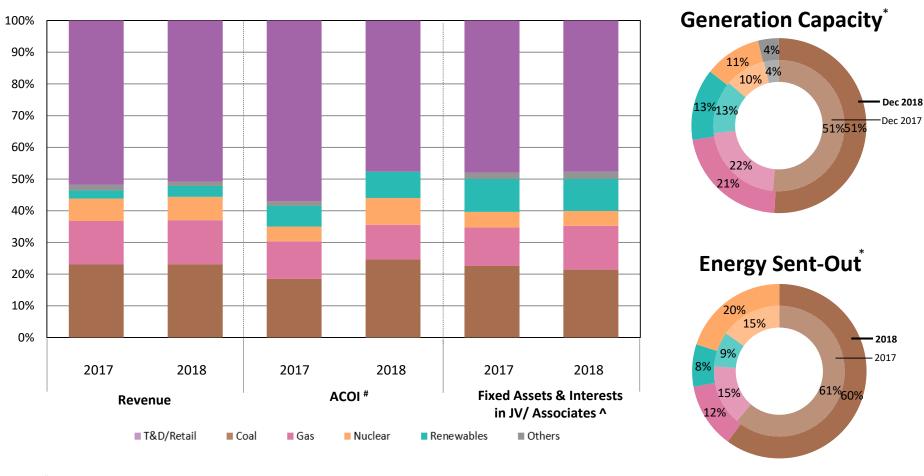
## CLP Group – Energy Sent Out – 2018

## **Energy Sent Out\***



## CLP Group – Financial Metrics and Generation by Activity – 2018

- CLP's integrated business includes energy retailing, transmission and distribution (T&D) and generation
- ✓ Approximately half of our earnings are contributed by our energy retailing and T&D businesses
- ✓ Nearly 50% of our generation portfolio is zero emission or gas-fired



Before unallocated expense

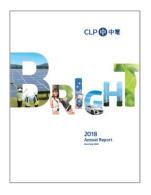
<sup>\*</sup> Equity basis as well as long-term capacity and energy purchase arrangements



<sup>^</sup> Included fixed assets, leasehold land and land use rights, investment properties and interest in and loan to JV and Associates

## **Additional Resources**

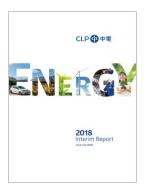
Annual Report\*
2018



Sustainability
Report\*
2018



Interim Report 2018



Introductory Pack February 2019



Interim Results Presentation
August 2018













Scan or click on the QR codes to go to appropriate pages

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\* To be published in March 2019





**CLP Holdings** 

# Thank you

**Energy for Brighter Tomorrows**