

**The Hong Kong & China Gas Co. Ltd.** (3 HK)

*incorporated*

**Towngas China Co. Ltd.** (1083 HK)

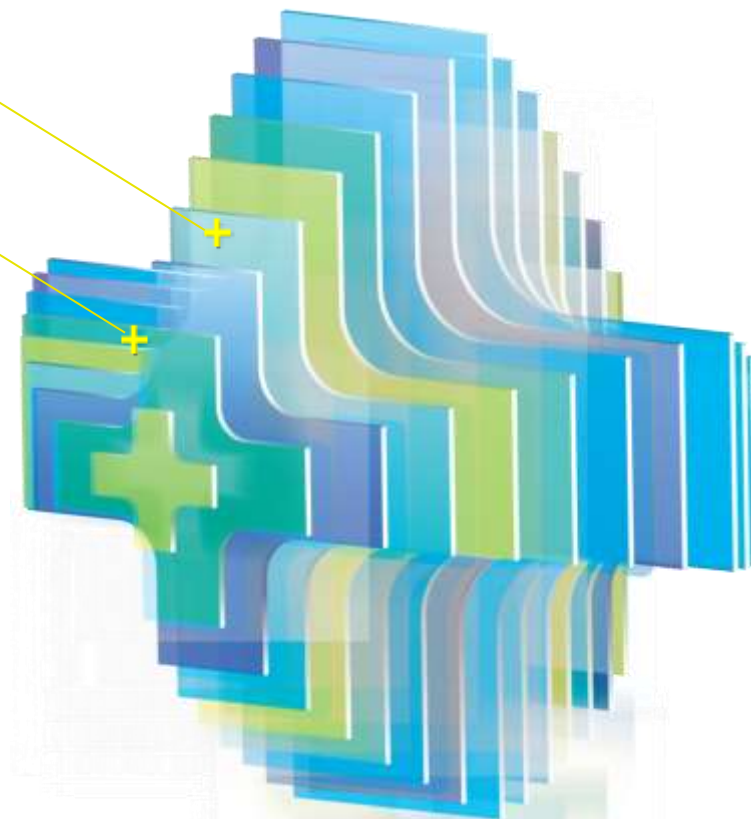


# 2017 Final Results

## Presentation

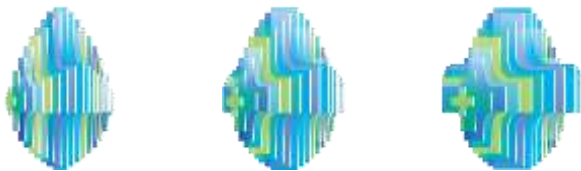
Growth Driven by

Innovations



# Agenda

- + 2017 Results/Group Financial Overview
- + Utilities Business
- + New Energy Business
- + Outlook



# HKCG Share Price Performance

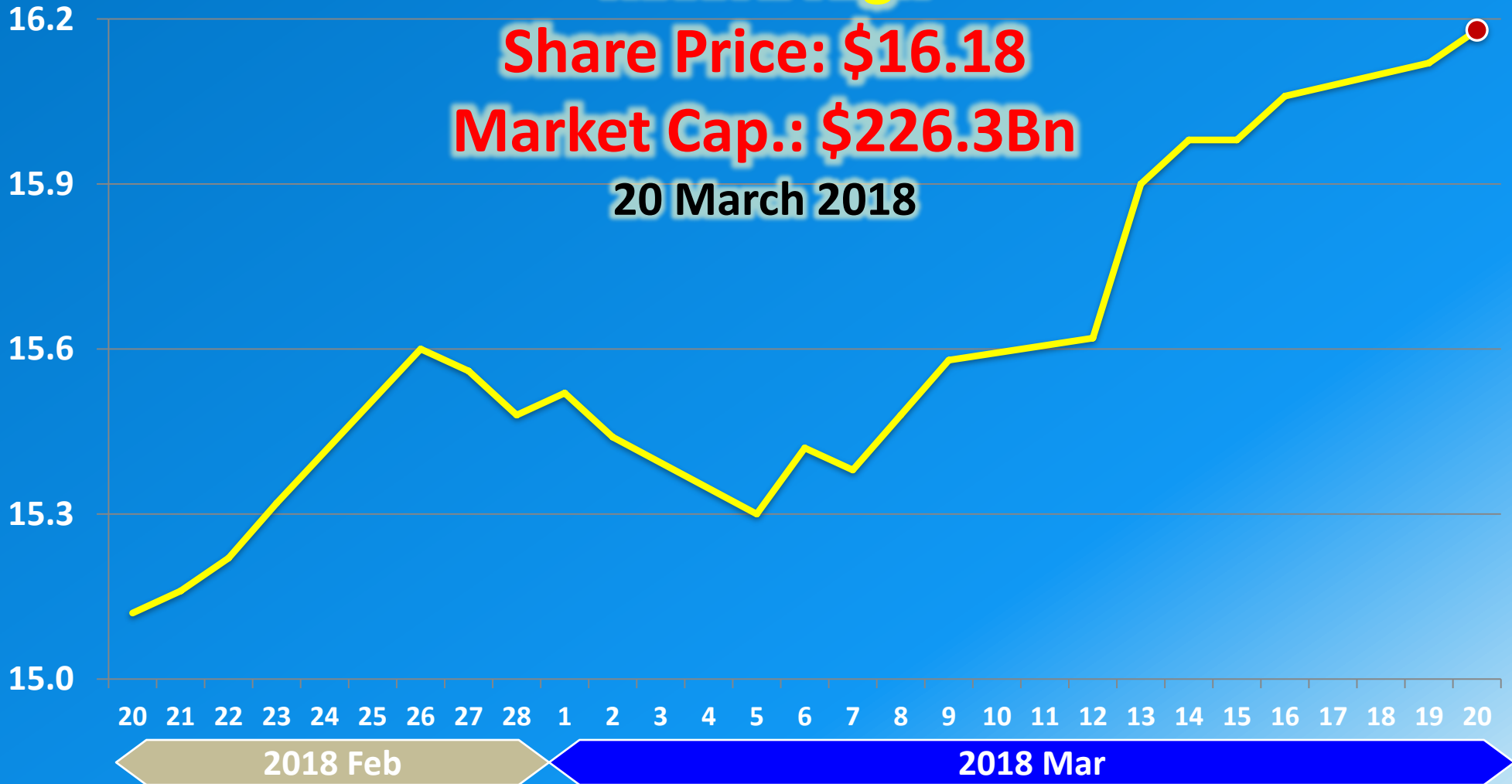


**Record High**

**Share Price: \$16.18**

**Market Cap.: \$226.3Bn**

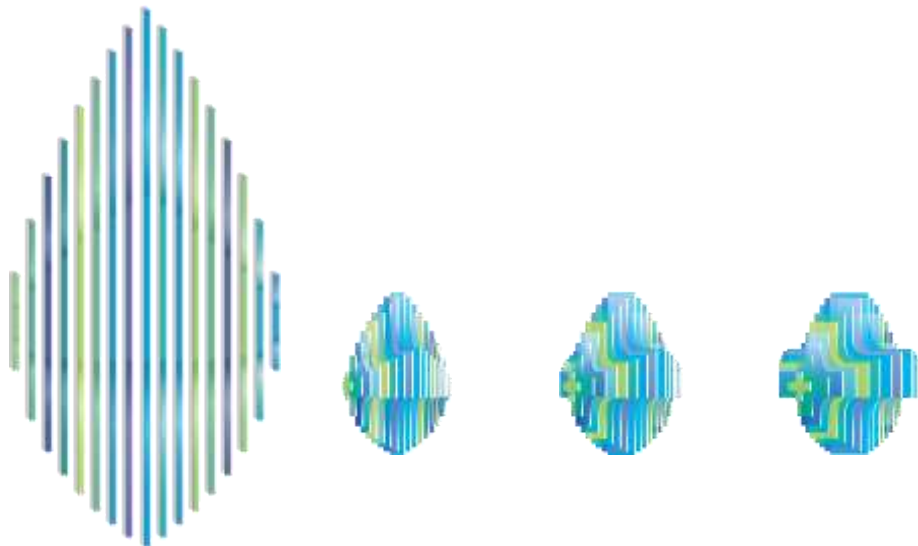
**20 March 2018**





**Sustainable**

**Growth**



# Group Financial Overview



# Three Business Drivers

## FY2017 Operating Profit After Tax



### HK Core (HC)

-  煤氣 Towngas • City-gas
-  TGT • Bandwidth +Data Centre

### Mainland Utilities (MU)

-  港华燃气 Towngas • City-gas (0003.hk + 1083.hk)
- Mid Stream
- Gas Storage
- Clean Transportation Fuels
-  华衍水务 Hua Yan Water • Water Supply/Sewage/ Bio-waste Treatment

### New Energy (NE)

-  ECO
- Renewables/Recycling
- Unconventional Fuels
- Clean Transportation Fuels
- Energy Infrastructure

**HK\$3.0Bn**  
+ 4%

**HK\$3.7Bn**  
+ 9%

**HK\$0.4Bn**  
+ 47%

**OPAT HK\$7.1Bn + 8%**

# 2017 Final Results at a Glance

## The Hong Kong & China Gas (3 HK)



	FY2017	FY2016	Change
<b>Revenue</b>	<b>HK\$32.5Bn</b>	<b>HK\$28.6Bn</b>	<b>+13.7%</b>
<b>Operating Profit</b>	<b>HK\$7.1Bn</b>	<b>HK\$6.6Bn</b>	<b>+8.1%</b>
• IFC Revaluation:	HK\$1.2Bn	HK\$1.2Bn	-
<b>Profit Attributable to Shareholders</b>	<b>HK\$8.2Bn</b>	<b>HK\$7.3Bn</b>	<b>+12.1%</b>
<b>Earnings Per Share</b>	<b>HK 58.8 cents</b>	<b>HK 52.5 cents</b>	<b>+12.1%</b>
<b>Full Year Dividends</b>	<b>HK 35 cents</b>	<b>HK 35 cents</b>	<b>-</b>
<b>Bonus shares:</b>	<b>1 for 10</b>	<b>1 for 10</b>	

# 1083.HK Towngas China Co., Ltd. (TCCL)

## FY2017

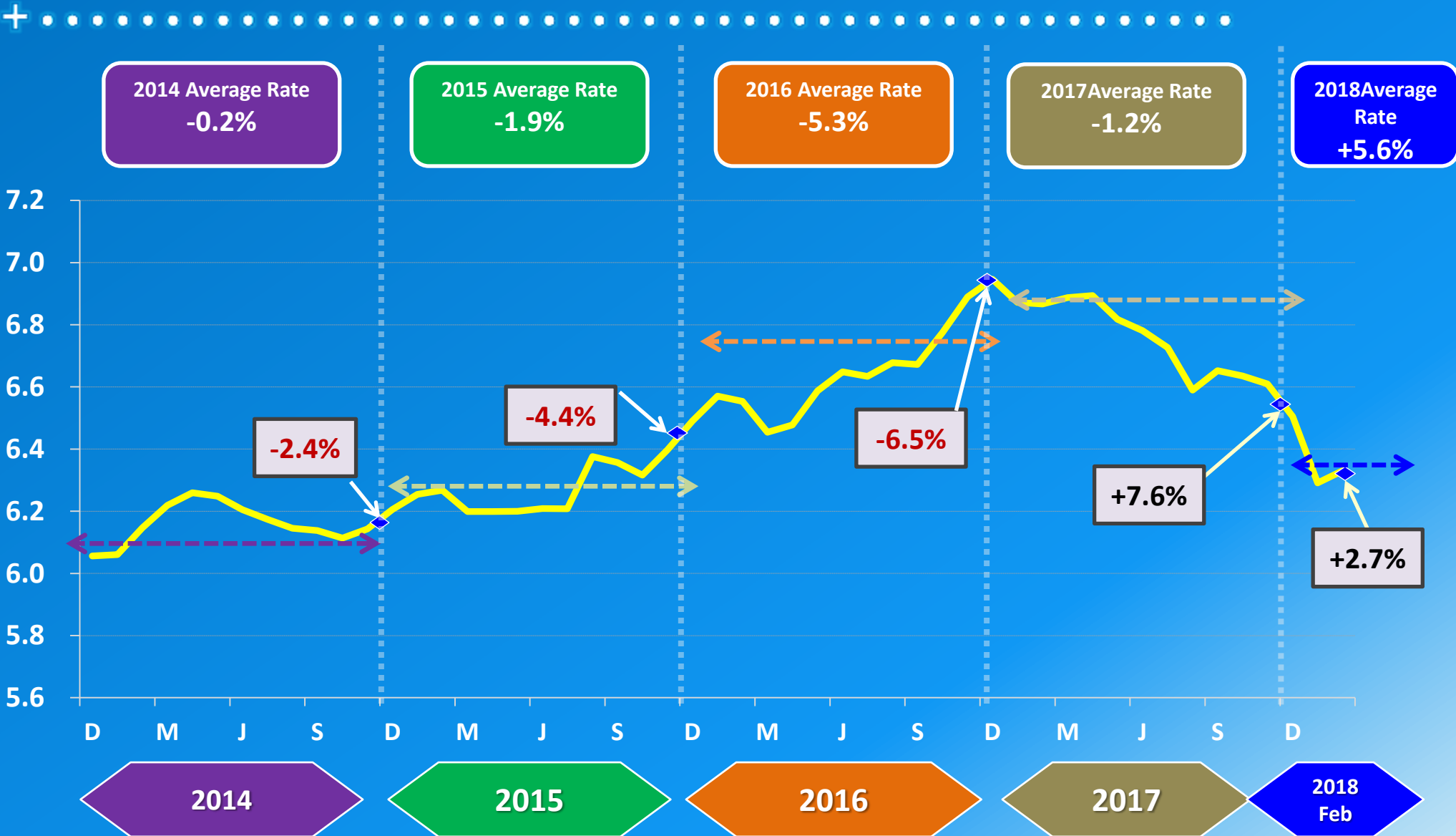


(HK\$ Mn)

	FY2017	FY2016	Change
<b>Turnover</b>			
Gas Sales & Others	6,996	5,518	27%
Connection Fees	1,764	1,663	6%
	<b><u>8,760</u></b>	<b><u>7,181</u></b>	<b>+22%</b>
<b>Operating Profit From Project Companies</b>	<b>1,677</b>	1,457	<b>+15%</b>
Corporate Finance Costs	<b>(371)</b>	(334)	<b>+11%</b>
Corporate Overhead	<b>(150)</b>	(149)	<b>+1%</b>
<b>Profit Attributable to Shareholders</b>	<b>1,365</b>	974	<b>+40%</b>
<b>Basic EPS (HK cents per share)</b>	<b>49.87</b>	36.26	<b>+38%</b>
<b>Dividend (HK cents per share)</b>	<b>15</b>	12	<b>+25%</b>



# Exchange Rate (Rmb/USD)

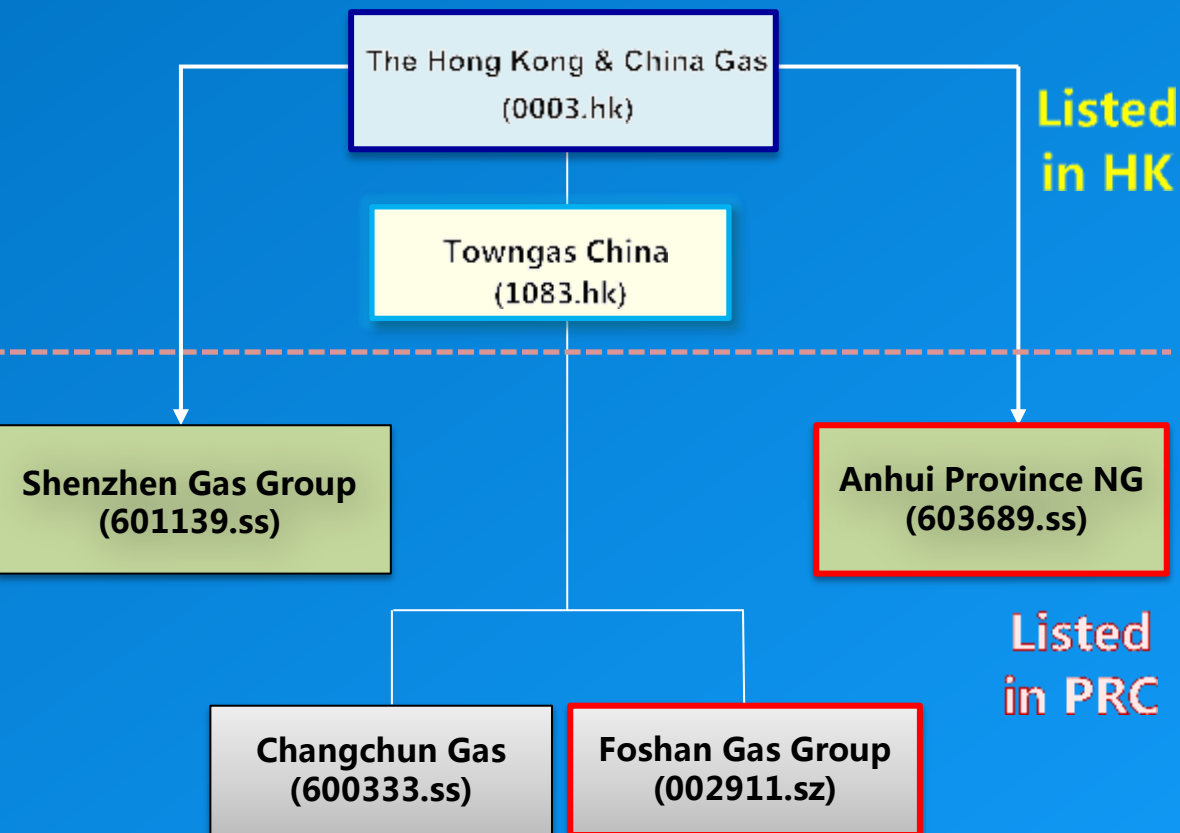




# HKCG Group (Simplified)



## Listed Companies under the HKCG



2017 IPO			
Month	IPO Company	Business nature	Deemed Disposal Gain
Jan.	Anhui Province NG	Midstream	HK\$44Mn
Nov.	Foshan Gas Group	City-gas	HK\$209Mn

# HKCG Group Financial Position as at 31 Dec 2017



HKCG (3 HK)	31 Dec 2017	31 Dec 2016	Change		31 Dec 2017	31 Dec 2016	Change
	HK\$ Bn	HK\$ Bn					
Total assets	131.1	116.7	+12%	Share price (HK\$)	15.38	12.49	+23%
Net asset value	70.2	62.9	+12%	Market cap. (HK\$ Bn)	215.1	158.8	+35%
Cash and Bank	12.8	11.5	+11%	No. of Shares	13.99Bn	12.72B	+10%
Total borrowings	36.9	33.2	+11%	Interest Coverage	9.8x	9.4x	
Return on Equity	14.4%	13.8%		Gearing (Net)	28%	28%	

Credit Ratings:



A+



A1

# TCCL Financial Position as at 31 Dec 2017



TCCL (1083 HK)	31 Dec 2017	31 Dec 2016	Change		31 Dec 2017	31 Dec 2016	Change
	HK\$ Bn	HK\$ Bn					
Total assets	32.8	28.0	+17%	Share price (HK\$)	6.28	4.08	+54%
Net asset value	17.2	14.7	+17%	Market cap. (HK\$ Bn)	17.4	11.1	+57%
Cash and Bank	1.7	1.6	+9%	No. of Shares	2.77Bn	2.71Bn	+2%
Total borrowings	8.8	7.8	+13%	Interest Coverage	9.8x	8.4x	
Return on Equity	9%	7%		Gearing (Net)	31%	32%	

Credit Ratings:



BBB+



Baa1

- + .....
- Issued Hong Kong's first energy green bonds

## Objectives:

1. Strengthen ESG / Sustainability Practice
2. Encourage Innovation
3. Improve Accountability & Transparency
4. Enhance HKCG ESG Reputation
5. Diversify Financing Channels

# Green Bond – Eligible Green Projects



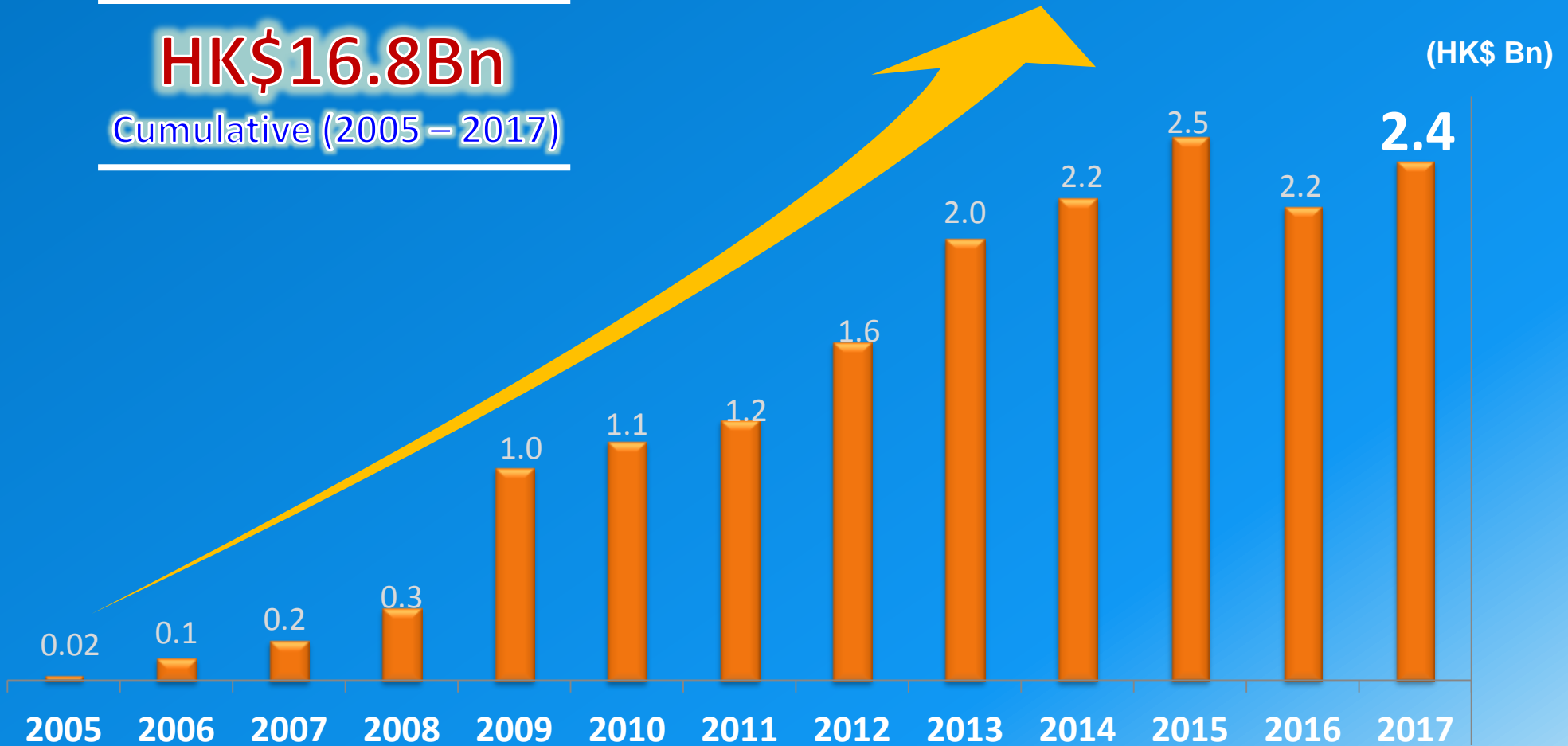
	Project	Allocated Amount (HK\$ Mn)	Type of Projects	Environmental Improvement (tCO <sub>2</sub> /yr)	Starting Date of Operations
HC	• Tseung Kwan O SENT Landfill	180	Landfill Gas Utilization	56,000	1Q 2018
MU	• Suzhou Kitchen Waste Processing	47	Food Waste Treatment	16,000	4Q 2018
NE	• Hubei Agricultural Waste	51	Biomass Utilization	278,000	2Q 2019
	• Zhangjiagang hydro-treated vegetable oil conversion	456		350,000	2Q 2018
<b>Total</b>		<b>HK\$734Mn</b>			

Note: PwC shall carry out green bond audit

# Strong Dividend from Offshore Projects



**HK\$16.8Bn**  
Cumulative (2005 – 2017)



# Rolling 3-Year Cashflow Projection



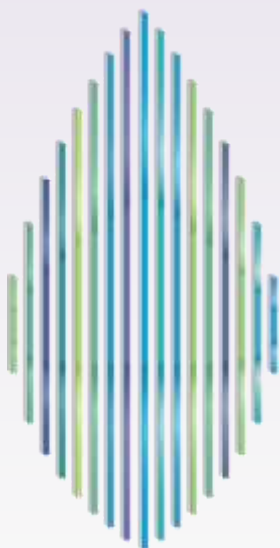
	(HK\$ Bn)
HK Operation	14
PRC Dividends Distribution	8
	<b>22</b>
Cash on Hand	13
	<b>35</b>
Dividend	18
HK Capex	3
PRC Investments	10
	<b>31</b>
<b>Cash Balance</b>	<b><u>4</u></b>





**Green City**

**Gas**



# Utilities

HONG KONG & MAINLAND



**Profit After Tax**

**HK\$1.7Bn** Stable

**Gas Sales**

**29,049TJ**

**+ 0.8%**

**Customers**

**1.88Mn**

**+ 23,993**

**Household  
Penetration**

**74%**

**Network  
Coverage**

**86%**

# Business Opportunities

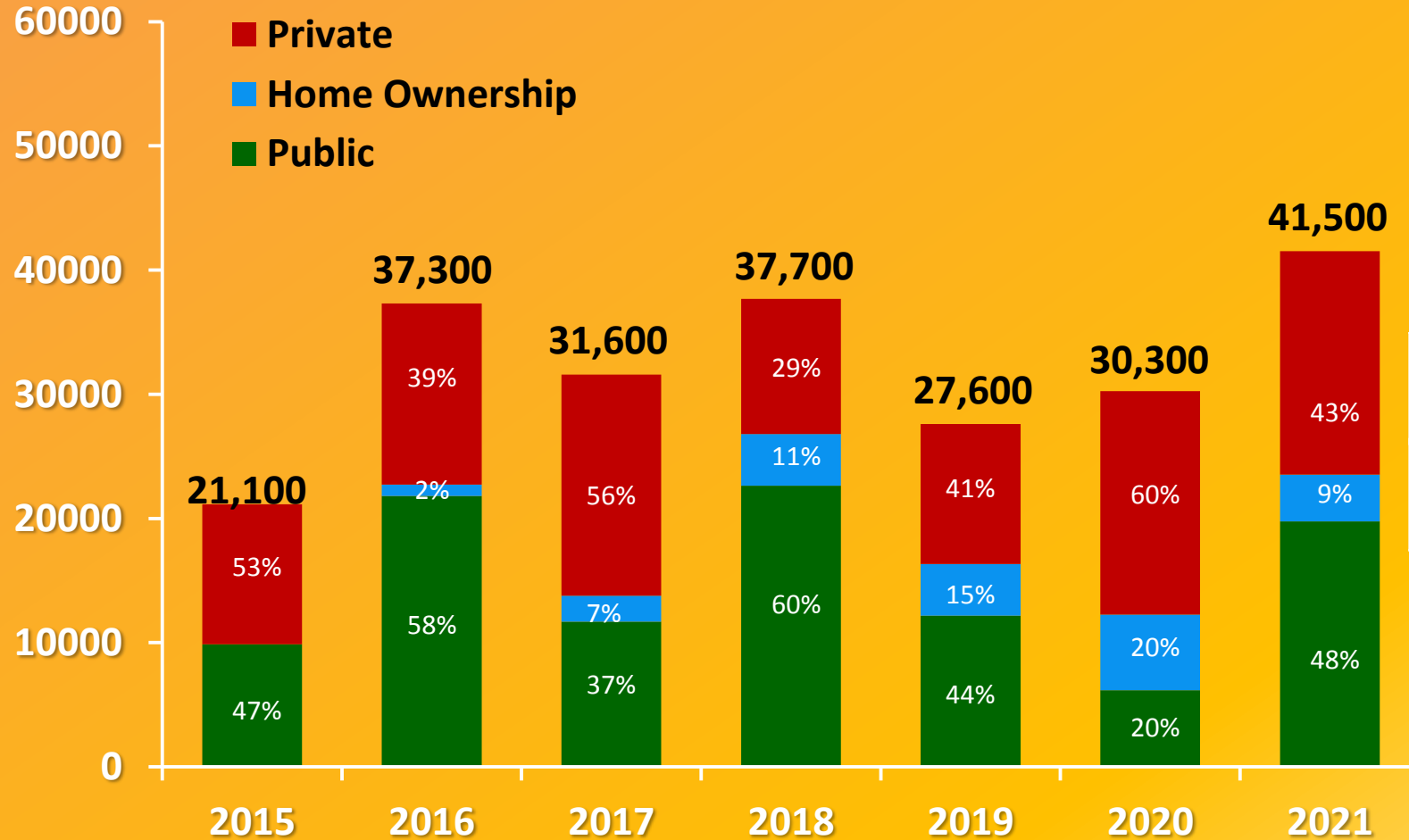


(HC)

- **More housing units coming**
- **New gas applications**
- **Extended business - Mia Cucina**
  - **Kitchen cabinet: > 30% market share**
  - **Appliances launched in March 2017**
- **CAPEX coming down**

# More Housing Units In Coming Years

(HC)



**2018-19 HK  
Government Budget**  
Next 5 Years: 200,000  
housing units

# More Commercial & Industrial Gas Sales



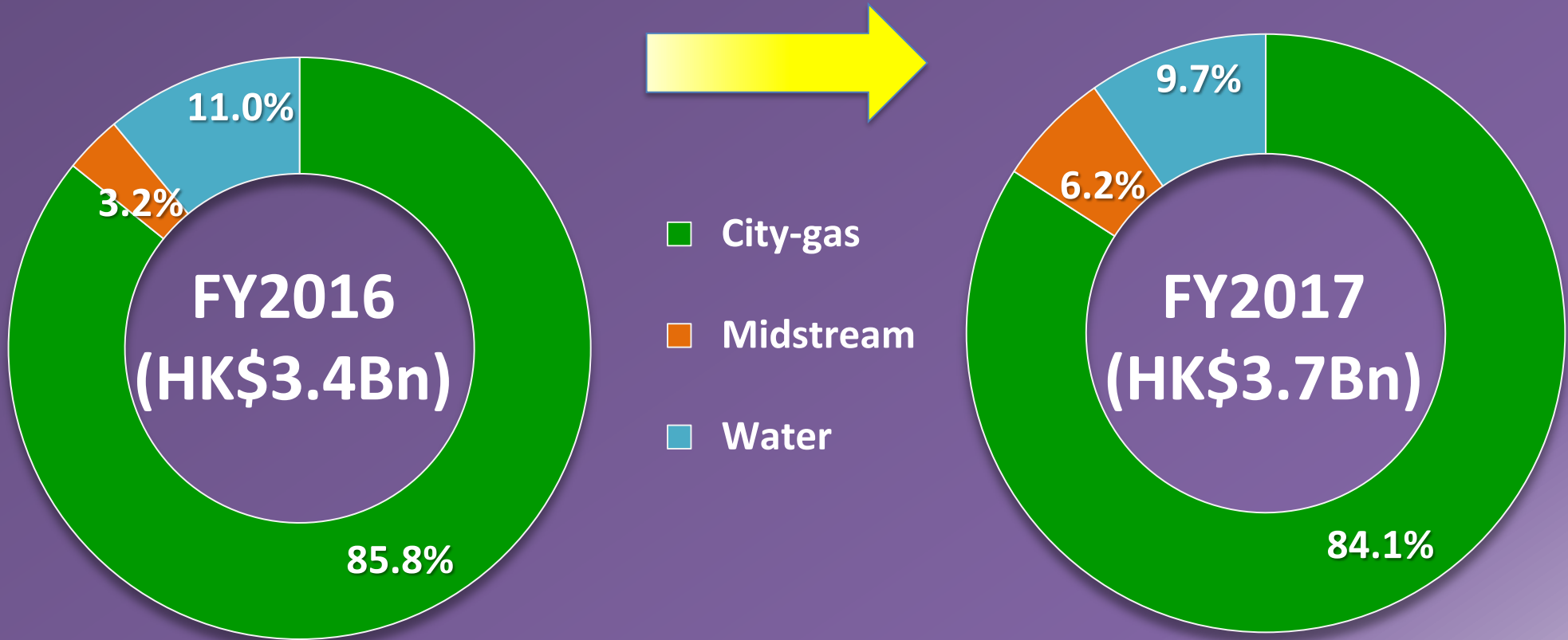
(HC)

	Target Customer	Annual Volume In 5 <sup>th</sup> Year
<b>Gas Cooling and Heating Applications</b>	Disneyland, Ocean Park, Data Centres, Science Park, HK Airport	<b>550TJ</b>
<b>Diesel Conversion Projects</b>	Hospitals, Hotels, Food Processing Factories, Laundries	<b>560TJ</b>
<b>New Projects</b>	Children Hospital and Hospital Authority Projects, Hotels, Food Factories Expansion, HKJC new Clubhouse	<b>230TJ</b>

# Mainland Utilities FY2017 – OPAT Mix



(MU)



(All JVs)



# Mainland Utilities FY2017 – Gas Volume



(MU)



 <p>City-gas</p>	<p><b>19.5Bn m<sup>3</sup></b>    <b>+ 14%</b> (131 projects)</p>
 <p>Midstream</p>	<p><b>4.7Bn m<sup>3</sup></b>    <b>+ 44%</b></p>



# Mainland City-gas Volume Mix

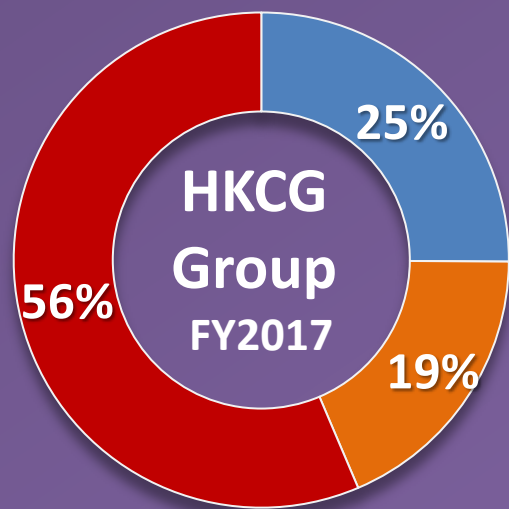


(MU)

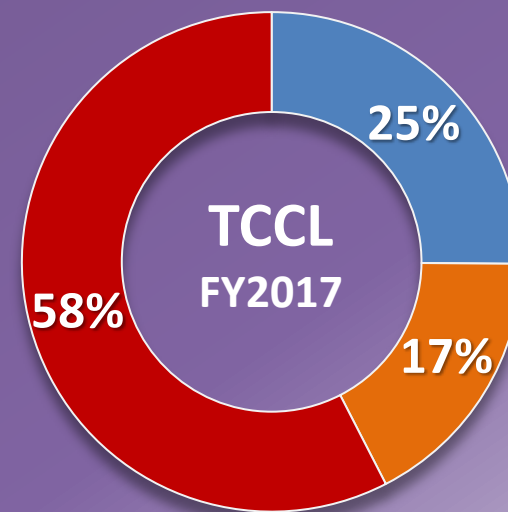


HKCG Group Volume mix	FY2016 (Mn m <sup>3</sup> )	FY2017 (Mn m <sup>3</sup> )	'17 vs '16 Change
Residential	4,477	4,905	+10%
Commercial	3,232	3,605	+12%
Industrial	9,434	10,998	+17%
	<b>17,143</b>	<b>19,508</b>	<b>+14%</b>

TCCL Volume mix	FY2016 (Mn m <sup>3</sup> )	FY2017 (Mn m <sup>3</sup> )	'17 vs '16 Change
Residential	1,917	2,116	+10%
Commercial	1,285	1,460	+14%
Industrial	3,918	4,841	+24%
	<b>7,120</b>	<b>8,417</b>	<b>+18%</b>



- Residential
- Commercial
- Industrial



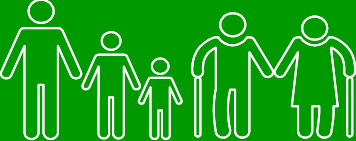
(All JVs)

# Mainland City-gas Customer Growth



(MU)



	HKCG Group	TCCL
Total Customers	25.4Mn	11.8Mn
New Connections	2.0Mn	1.0Mn
Customers Gained	2.3Mn	0.9Mn

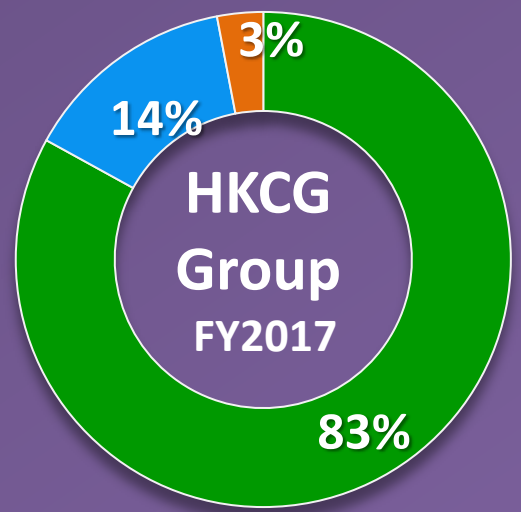
# Mainland Utilities FY2017 – City-gas Turnover Mix

(MU)

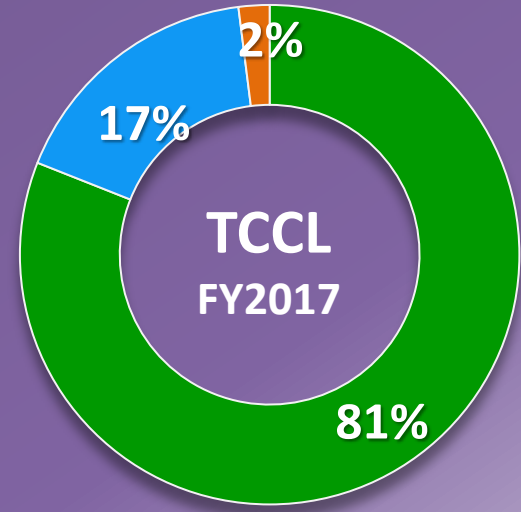


HKCG Group Turnover mix	FY2016 (HK\$ Mn)	FY2017 (HK\$ Mn)	'17 vs '16 Change
Piped-gas	24,563	28,243	+15%
Connection Fee	4,687	4,788	+2%
Others	847	975	+15%
	<b>30,097</b>	<b>34,006</b>	<b>+13%</b>

TCCL Turnover mix	FY2016 (HK\$ Mn)	FY2017 (HK\$ Mn)	'17 vs '16 Change
Piped-gas	9,798	11,746	+20%
Connection Fee	2,441	2,470	+1%
Others	241	291	+21%
	<b>12,480</b>	<b>14,507</b>	<b>+16%</b>



- Piped-gas
- Connection Fee
- Others



(All JVs Shared)

# Market Development – Coal-to Gas and C&I

(MU)



Industrial Sector Coal-to-Gas Conversion	2016	2017
JVs with government subsidies & supporting policy	94	114
Converted Customer	1,380	1,720
Capacity (Steam tons)	8,073	8,900
Annualised NG Demand (Mn m <sup>3</sup> /p.a.)	1,050	1,160
Commercial Sector	2016	2017
Newly Acquired Customer	12,000	18,000
Annualised NG Demand (Mn m <sup>3</sup> /p.a.)	300	580



## ► Distributed Energy System (DES)

- Established Towngas China Energy Investment Ltd. to invest in & operate DES projects, with 6 projects captured in 2017
- Favorable government policies and lower NG price boost DES business
- Over 40 key projects are being followed

<b>Total Number of projects in operating</b>	<b>8 Projects</b>
<b>Gas Volume in 2017</b>	<b>125Mn m<sup>3</sup></b>
<b>New Projects</b> — <b>Captured in 2017</b>	<b>6 Projects</b>
<b>in Discussion</b>	<b>40 Projects</b>





## ► Coal-to-Gas Conversion

- National policy on replacing coal with natural gas in particular in Northern China
- Huge market potential of 5 billion m<sup>3</sup> p.a.
- Air quality improving with strong government support

## ► Space Heating

- Rising living standard led to booming needs of space heating in central & northern China with stepped-up tariff and higher margin
- Space heating generates 2,000m<sup>3</sup> p.a. gas demand per household (10x ordinary household)



# Business Opportunities



(MU)

- ▶ IPO of Foshan Gas with one-off gain of HK\$209Mn
  - Market capitalization: RMB13.7Bn , +77%
- ▶ At least 3 JVs are considering IPO

# Natural Gas Market Environment



(MU)



- ▶ Central government promotes natural gas to cut carbon emissions to improve environment
- ▶ Gas industry continues to achieve the fastest growth in the energy sector
- ▶ According to the 13<sup>th</sup> Five-Year Plan

	2017	2020	2030
NG in Energy Mix	7%	10%	15%
Demand (Bn m <sup>3</sup> )	238	360	~480
Domestic Production (Bn m <sup>3</sup> )	149	~200	~220
Import (Bn m <sup>3</sup> )	92	~170	~280

- ▶ Ample supply, particularly LNG import, Russia PNG
- ▶ Insufficient gas storage capacity
- ▶ Government policies & price regulations help drive a healthy market reform

# Opportunities & Challenges



## ▶ Connection fees

- Joint report on connection fees initiated by city-gas groups addressed to central government
- Government supports its importance on gas development and the rationale behind
- Connection fees now included in property prices reducing visibility
- Urbanization of 1% per year keeps momentum on property market and gas consumption

# Opportunities & Challenges



- ▶ **Reducing competition from small scale LNG & direct supplies**
  - Acute LNG shortage in winter plus sky rocket price drove small scale LNG suppliers out of the market
  - Government's support to strengthen their control on safety and concession rights
  
- ▶ **Manage to keep gas margin stable while lowering unit cost**

## ► Winter gas shortage

- Nation wide gas shortage has aroused government great concerns on gas supply security
- Government supports in term of favorable policies and financial subsidies to be anticipated
- Jintan Gas Storage to be in business in mid 2018
- Cooperation with PetroChina and Shanghai Gas on gas supply during 2017 winter time

# Business Opportunities

## ► Optimistic for double digit volume growth

	Projected Volume in the 5 <sup>th</sup> Year
• Distributed Energy System in new areas	1.3Bn m <sup>3</sup>
• Coal-to-Gas Conversion <ul style="list-style-type: none"><li>▪ Direct</li><li>▪ Through DES</li></ul>	2.8Bn m <sup>3</sup> 2.2Bn m <sup>3</sup>
• Space Heating	1.0Bn m <sup>3</sup>

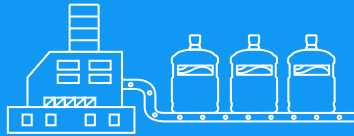
7.3 Bn m<sup>3</sup>



# Mainland Utilities FY2017 – City-Water



(MU)



## Stable Earnings

**Water Volume**

**+ 3%**

**467Mn tons**

**Total customers**

**1.24Mn (+ 53,580)**

**New Projects**

**Food waste treatment plant in Suzhou to be commissioned in 4Q 2018**



# Mainland Utilities FY2017 – **Midstream**



(MU)

- ▶ **Strong gas volume rebound by 44% due to coal-to-gas and industry recovery in particularly Hebei & Anhui Province**  
**Natural Gas Co. remained strong growth**
  
- ▶ **IPO of Anhui Province Natural Gas Co. in 2017**
  - **Market capitalization: Rmb3,955Mn, +50%**

# Jintan Underground NG Storage

## Project Information

- **Phase I capacity: (3 caverns)** **140Mn m<sup>3</sup>**
- **Completion:** **Jan 2018**

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- **Phase II capacity: (7 caverns)** **300Mn m<sup>3</sup>**
- **Construction Commencement:** **Mar 2018**

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- **Phase III capacity: (12 caverns)** **1,000Mn m<sup>3</sup>**

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- **Total Capacity** **1,440Mn m<sup>3</sup>**

Measure in standard volume



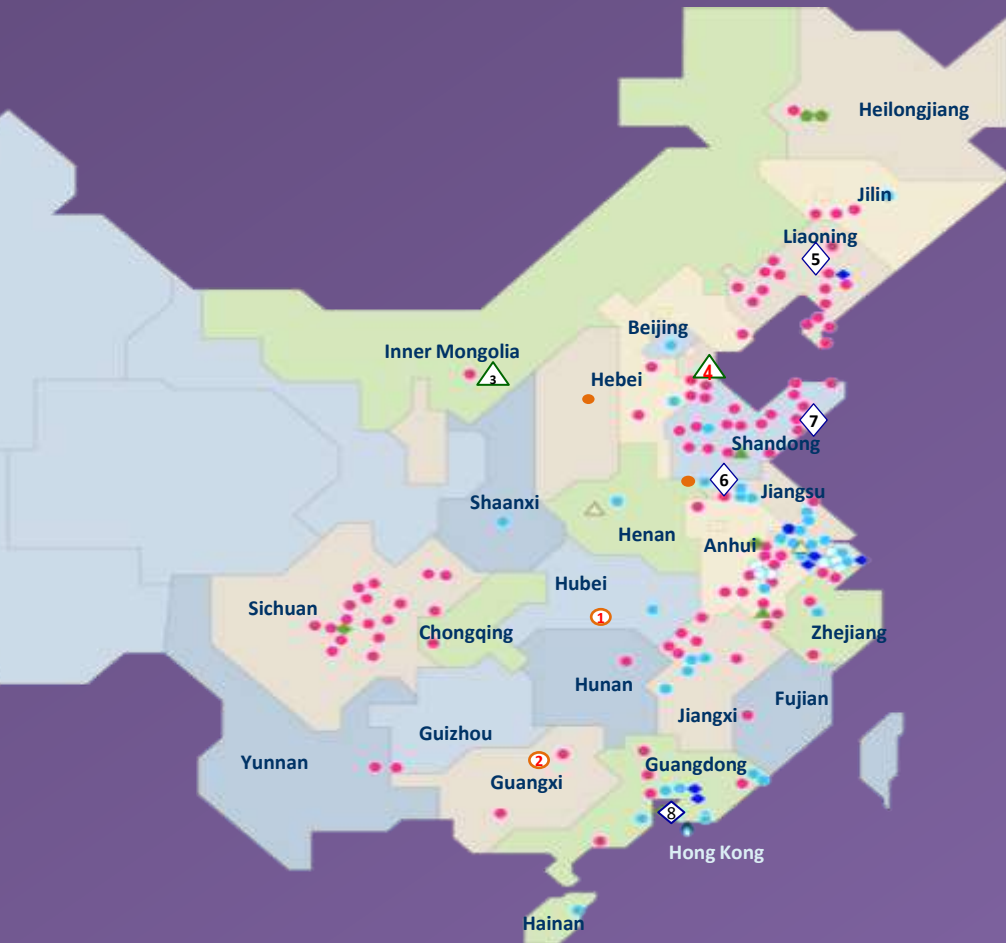
# Territorial Coverage

Up to 28 Feb 2018



(MU)

8 projects added, total **164** projects in **24** provincial regions



New Projects	
City-gas	<ul style="list-style-type: none"> <li>1. Zhongxiang, Hubei</li> <li>2. Liuzhou, Guangxi</li> </ul>
Midstream	<ul style="list-style-type: none"> <li>3. Guyang, Inner Mongolia</li> <li>4. Huanghua Port LNG</li> </ul>
Distributed Energy	<ul style="list-style-type: none"> <li>5. Shenyang Economic &amp; Development Zone</li> <li>6. Jiawang District, Xuzhou</li> <li>7. Jimo Chuangzi New District, Qingdao</li> </ul>
Others	<ul style="list-style-type: none"> <li>8. Mia Cucina Kitchen Solution</li> </ul>

Utilities: Number of projects	
City-gas	132 (HKCG: 34 ● + TCCL: 98 ●)
Midstream	10 △ HKCG: 7 ▲ TCCL: 3
Water, Sewage & Waste Treatment	7 ○
Refilling stations	3 ● HKCG: 1 ● TCCL: 2
Others/Distributed Energy	12 ● HKCG: 7 ● TCCL: 5



Energy

Innovation



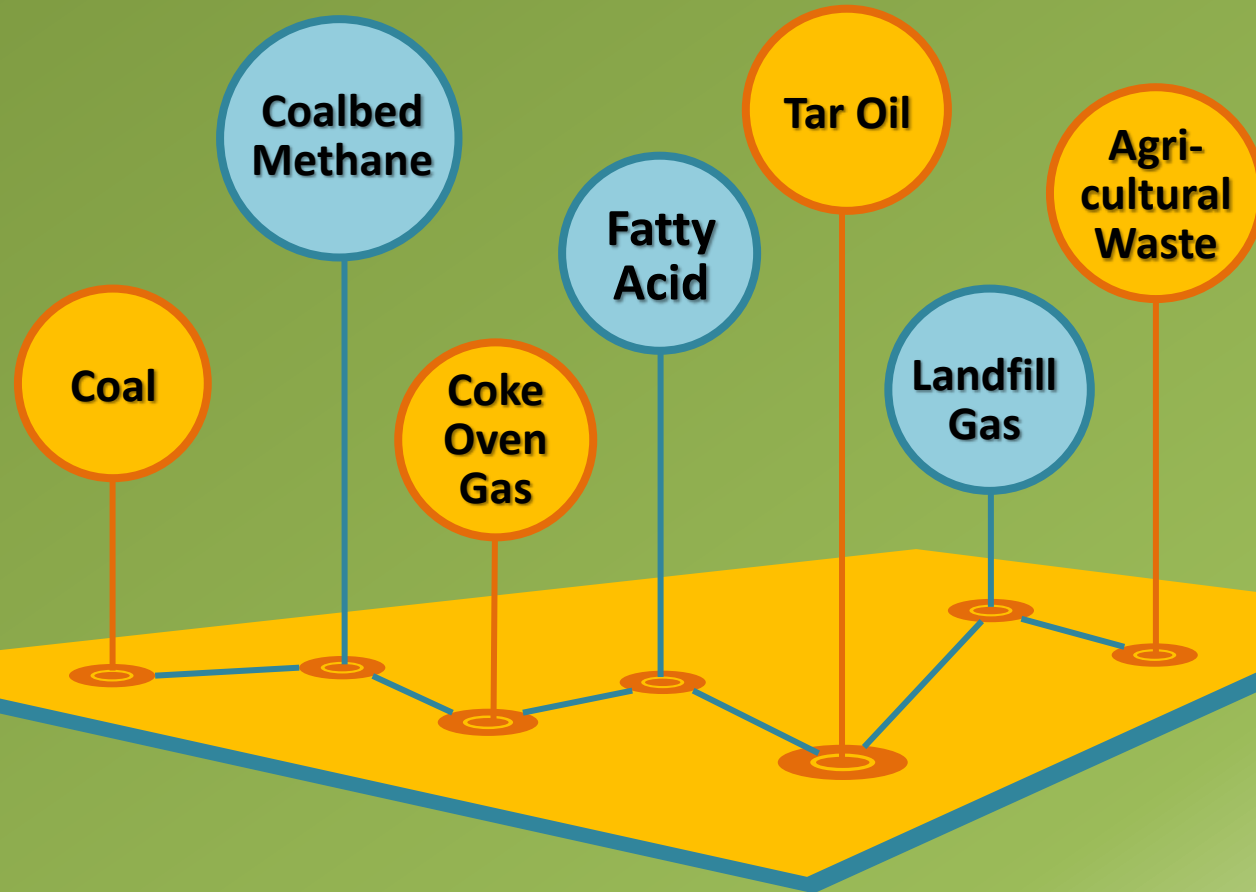
# New Energy





# Low Value Feedstock

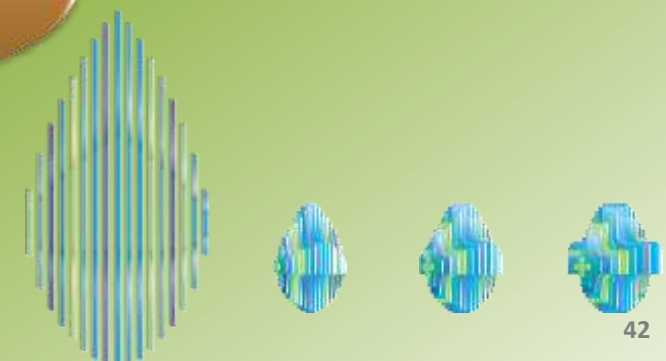
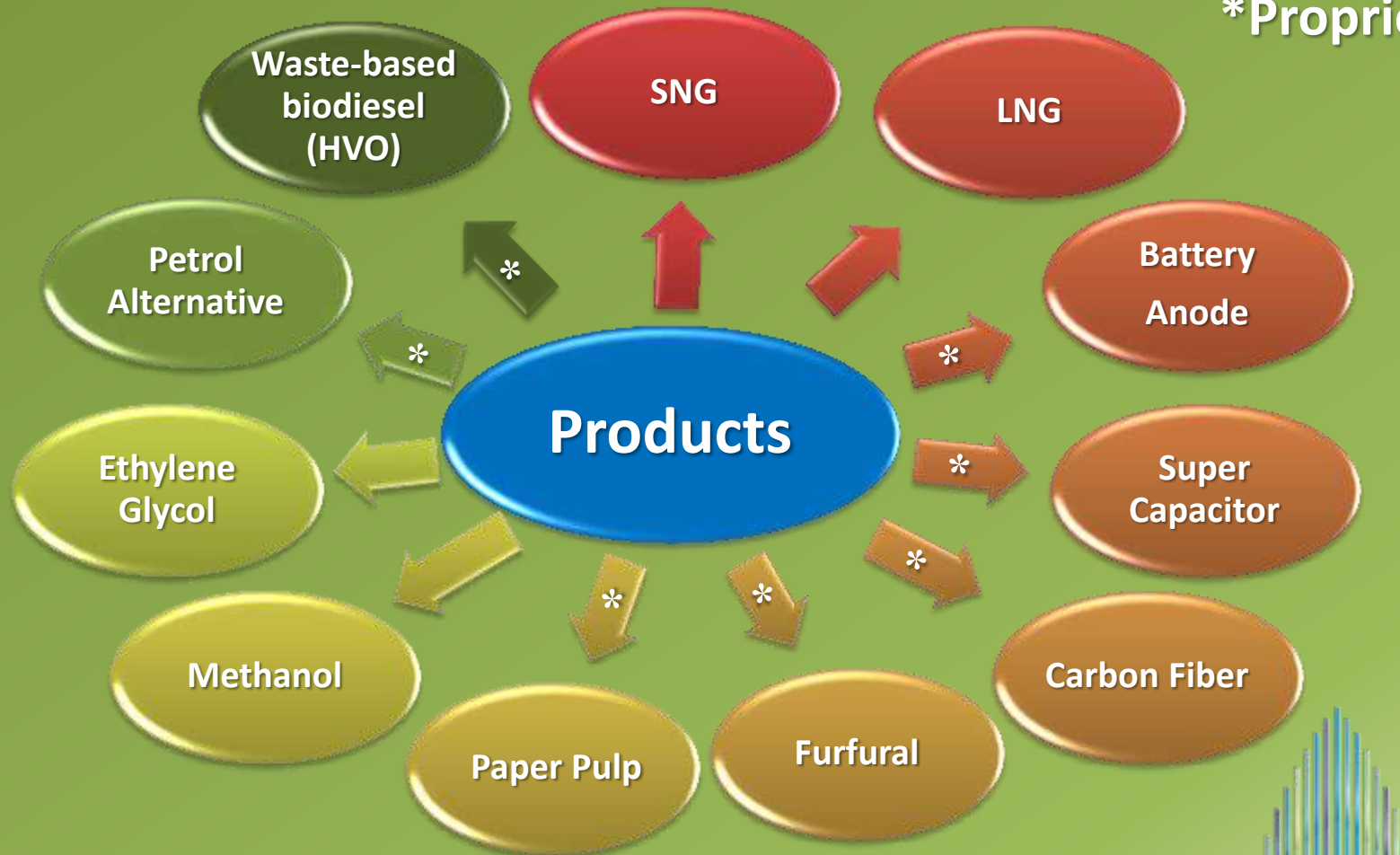
Clean Processes



# High Value Products

(NE)

\*Proprietary technology



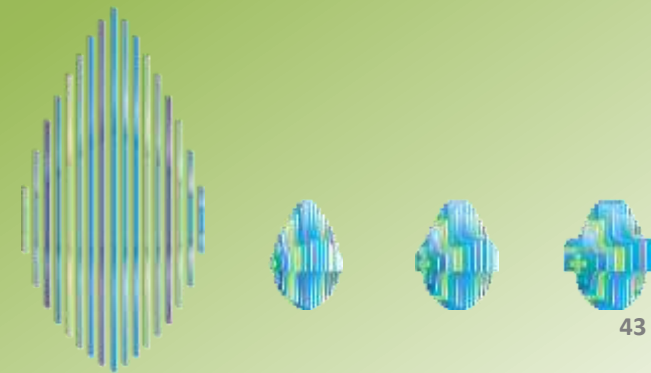
# Shanxi, Coalbed Methane to LNG Plant: In Production



(NE)



- Feedstock: 250 Mn m<sup>3</sup> CBM
- Product : 170k tons LCBM





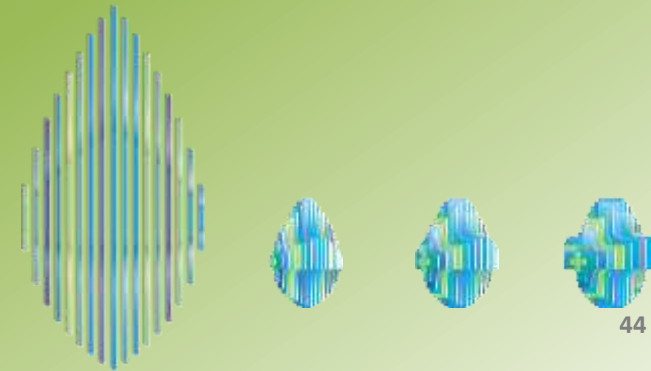
# Inner Mongolia, Coal to Methanol Plant: In Production



(NE)



- **Feedstock: 720k tons Coal**
- **Product : 340k tons Methanol**



# Zhangjiagang, HVO Plant (2Q 2018)



- **Feedstock: 240k tons Fatty Acid**  
Palm acid oil, Used cooking oil
- **Product : 108k tons HVO**  
Export Oriented

**HVO: Hydrotreated Vegetable Oil**





# First HVO Shipment to Europe (1Q 2018)



(NE)

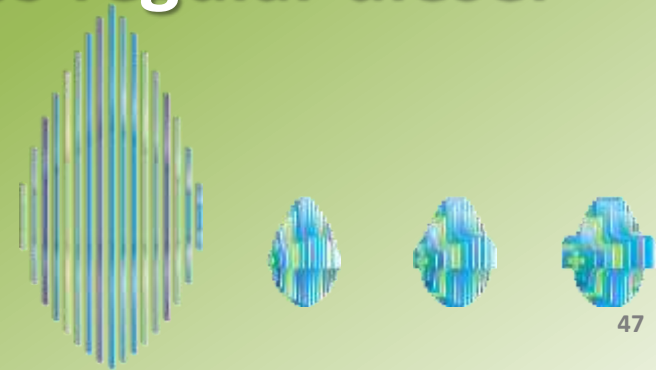


**3,000 tons cargo loaded on tanker  
Victoria, en route to Rotterdam**



# About HVO (Green Diesel)

- Produced from vegetable oils or animal fat – Waste-based
- More chemically stable. Long shelf-life
- High cetane number
- Directly blend (up to 100%) to diesel
- Lower CFPP
- 10% NO<sub>x</sub> ↓, 30% CO<sub>2</sub> ↓ compared to regular diesel
- Major Markets: Europe and USA



# Inner Mongolia, Coal to Ethylene Glycol Plant (2Q 2018)



- Feedstock: 300Mn m<sup>3</sup> Syngas
- Product : 120k tons EG





# Xuzhou, Coke Oven Gas to LNG Plant (3Q 2018)



- Feedstock: 200Mn m<sup>3</sup> COG
- Product : 40k tons of LNG



# Hubei, Agricultural Waste to Furfural (2Q 2019)



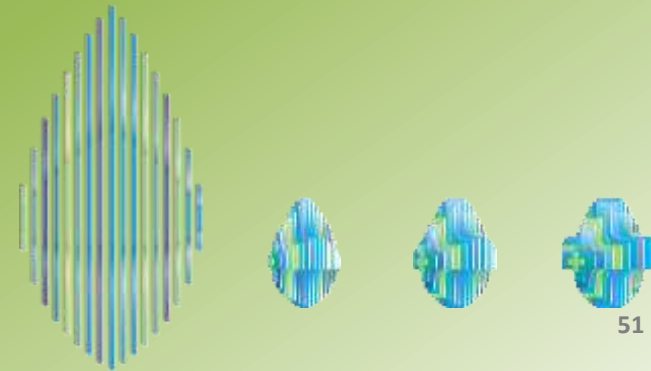
- Feedstock: 120k tons Stalks
- Product : 20k tons of Furfural  
85k tons of Paper Pulp





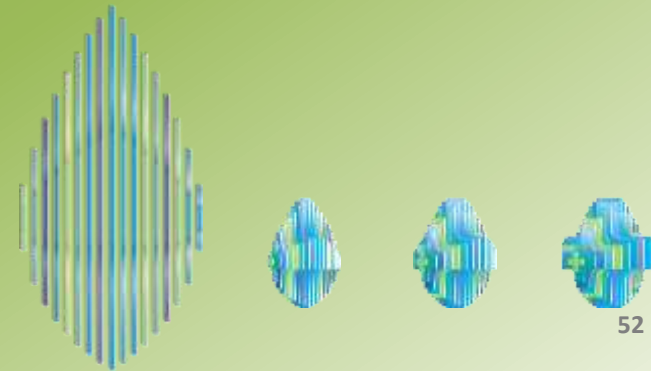
# About Furfural (C<sub>5</sub>H<sub>4</sub>O<sub>2</sub>)

- An important renewable, non-petroleum based chemical feedstock
- Used in the production of adhesives, casting resins, cements, coatings, solvents, nylon, synthetic rubber, improvement of diesel fuel characteristics



# New Energy Result Highlights


















- Operating Profit After Tax grew by 47% to HK\$376Mn
- HK Aviation Fuel throughput volume grew steadily +6%
- Shanxi LCBM sales volume +11%, PAT HK\$73M
- PRC refilling business sales volume +53%
- Upcoming commissioning of new projects:
  - Zhangjiagang Fatty Acid to HVO Plant 2Q 18
  - IM Coal to Ethylene Glycol plant 2Q 18
  - Xuzhou COG to LNG plant 3Q 18
  - Tar Oil to Carbon Materials 4Q 18
  - Agricultural Waste Conversion Plant 2Q 19

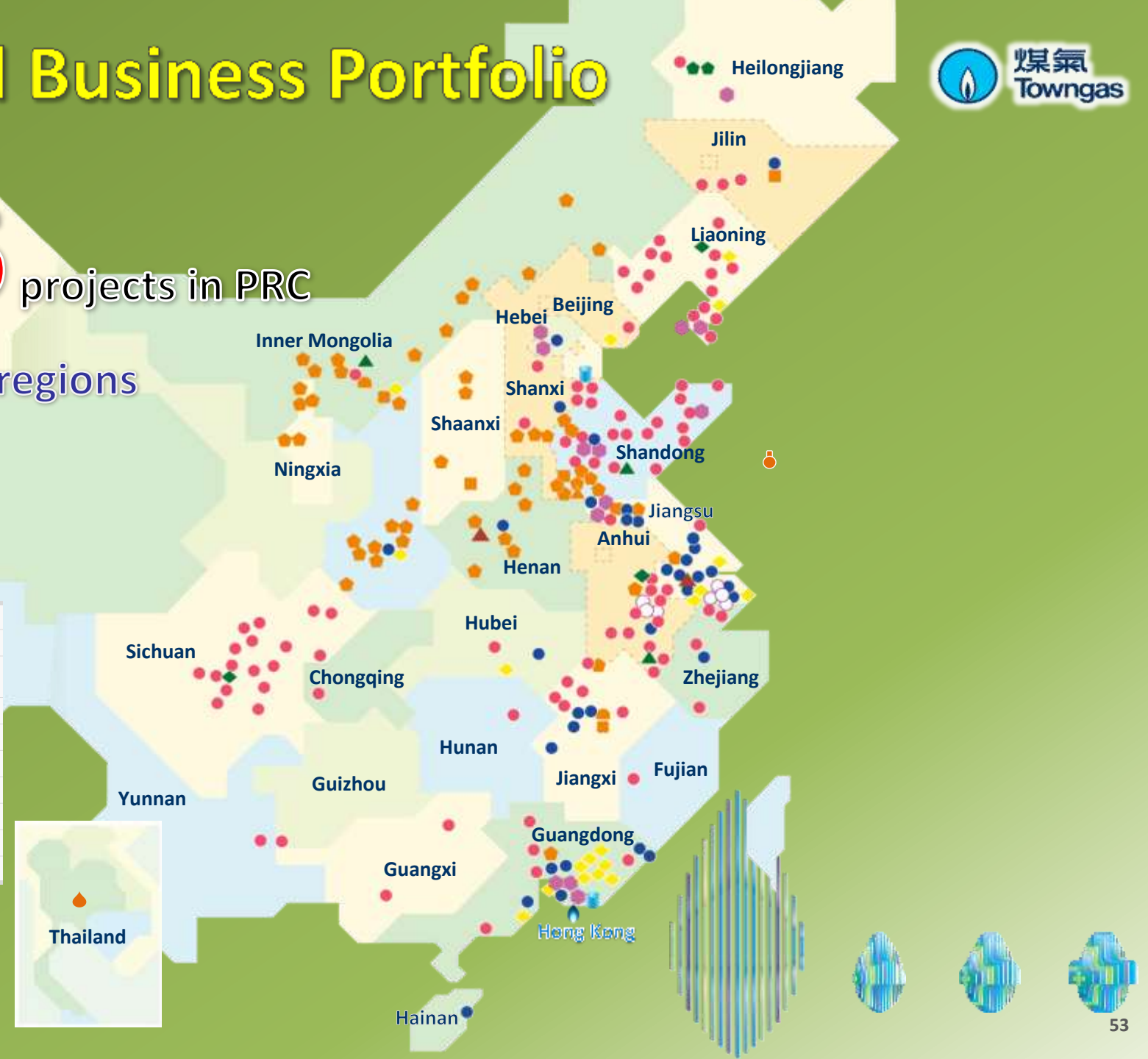


# Diversified Business Portfolio



Total **246** projects in PRC  
**26** provincial regions

City-gas	 
Midstream	   
Water, Sewage & Waste Treatment	
Refilling Stations	 
Gas-based	
Coal-based	 
Biomass	
Oil E&P	
Telecommunications	
Others	 

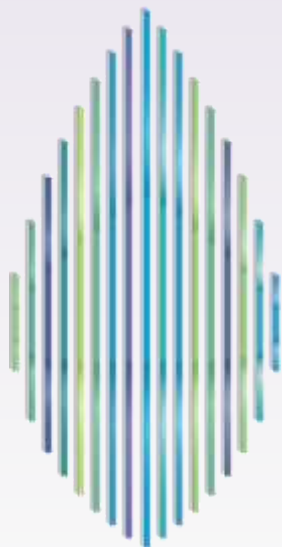


Up to 31 Dec 2017



Sustainable

Growth



# Business Outlook







煤氣  
Towngas

## *Our Vision*

*To be Asia's leading **clean energy** supplier and quality service provider, with a focus on **innovation** and **environmental-friendliness**.*

## A Handful of Opportunities

- ❖ China's focused effort in improving air quality and mitigating climate changes will ensure rapid growth in natural gas consumption. (15% by 2030)
- ❖ Urbanization continues to drive city expansion and gas connection.
- ❖ Household-metered space heating becoming a norm in Eastern/Central China, and spreading to other regions.
- ❖ Natural gas DES can enhance energy efficiency and take up certain power plant loads.
- ❖ Gas supply adequacy in the winter should improve as more storage capacities are being put in place.



## A Handful of Opportunities (Con't)

- ❖ Middle class in China is growing rapidly, demanding improved life style, air/water quality, living environment and sustainability.
- ❖ Our water business now expanding towards urban waste treatment industry.
- ❖ Our new energy arm's R&D has successfully developed several new technologies which will make a marked difference in agricultural/ industrial waste treatment and upgrading.
- ❖ 5 new energy pilot processing facilities are scheduled to commence operation in 2018/2019.



## A Handful of Opportunities (Con't)

- ❖ Our new energy processing facilities are multipliable and becoming the group's another growth engine.
- ❖ Carbon emission reduction and carbon trading will become a focus as China takes lead in responding to global climate change.
- ❖ LNG as fuel for heavy-trucks and marine vessels is an encouraged policy.
- ❖ Electric driven transportation is being a trend. Demand for battery materials will grow rapidly, benefitting our carbon material project.
- ❖ Our telecommunication business (6x data centers plus connecting fibre optics) is small at this time, but growing fast.

# Looking Forward

HC

Remains as a stable, low-growth cash generating business

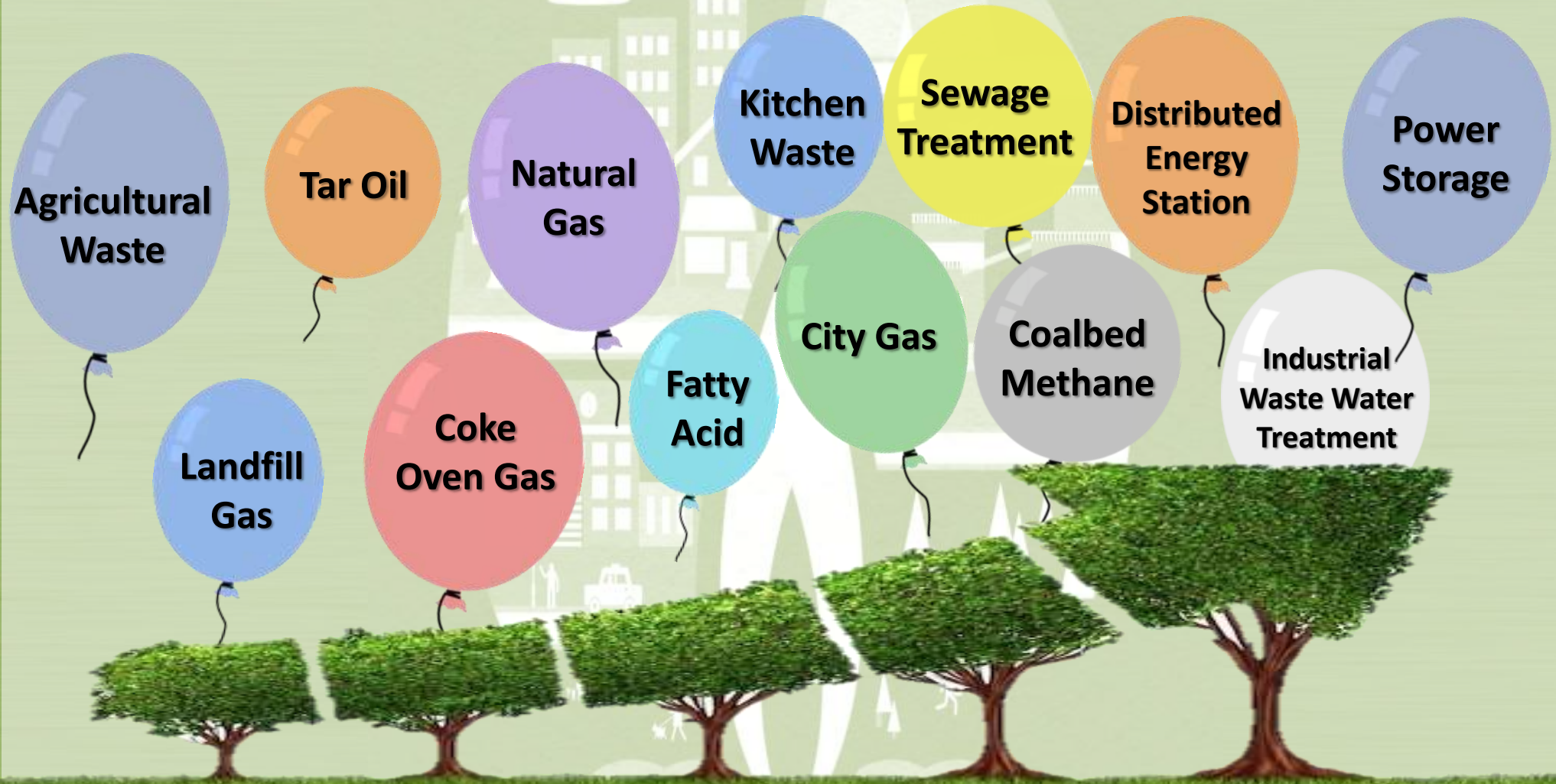
MU

Continues to be a mid-growth locomotive having market share & organic volume expansion while capturing the environmental & urbanization opportunities

NE

Positioned to be a high-growth driver focusing on renewable/recycling & clean fuels, while developing proprietary technologies, at the same time establishing energy infrastructures

# A Leading Green Corporation



Driven by innovation in products, services, processes, systems, productivity....



煤氣  
Towngas

Growth Driven by  
Innovations

**Thank You**





# Disclaimer

This presentation and subsequent discussion may contain certain forward-looking statements. These forward-looking statements reflect the company's view on some future events and involve known and unknown risks and uncertainties and other factors which may cause actual performance and development differ materially. Past performance cannot be relied on as a guide for future performance.