Natural Gas Supply to CAPCO/CLP

An Introduction to LegCo Panel on Economic Development
8th January 2013
CLP Pioneered Gas-fired Power Generation in Hong Kong in 1996

- 2nd longest subsea pipeline in the world when built in early 1990’s
- One of the 4 largest offshore gas fields in China at that time

~800km

Black Point Power Station
Energy MoU signed with National Energy Administration

- 3 sources of new natural gas supply identified to be pursued:
  - Second West-East Natural Gas Pipeline (WEPII)
  - A new Liquefied Natural Gas Terminal in Shenzhen
  - New gas supplies from the South China Sea

The Energy MoU signed in 2008 ensured long term clean energy supply to Hong Kong
The Second West-East Gas Pipeline – the earliest available gas supply to Hong Kong to sustain gas-fired power generation

Length
- Approx. 9,000km, the world’s longest gas pipeline
- 1 truck line & 8 branches
- Cover 15 provinces & regions including Hong Kong

Serving
- 500 million people

Capacity
- 30 billion cubic metres annually

Source: PetroChina website
Black Point Power Station –
New Gas Receiving Station & Plant Modifications
# Gas Supply Agreement (GSA) for WEPII Gas

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<td>Price</td>
<td>Clear and transparent pricing mechanism</td>
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<td>Contract Price consists of following components:</td>
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<td>a) A commodity element, reflecting cost of gas imported from Central Asia to China, in which typically moves in line with prices of oil</td>
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<td>b) Transportation element, reflecting cost of pipeline transportation charge for taking gas from the border in Xinjiang to Hong Kong</td>
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<td>c) Applicable taxes and duties and administration costs</td>
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Gas Price Trend

CLP Gas Prices: Yacheng ~$6; Short term South China Sea ~$14; Market ~$18-20
WEPII Gas Price Competitiveness

Comparison of LNG Import Prices to China and Japan versus Crude Oil Price

End Users - Cost Estimates
(For illustration purpose at US$100/Barrel crude)

Guangdong

Hong Kong

Comparison of Cost Estimates to End Users

Under current market, 2013 WEPII gas price is expected to be around US$18 - 20/MMBtu

- Price level of WEPII gas supply to Hong Kong is generally in line with LNG import prices
- Adding infrastructure cost to end users, WEPII gas supply price to Hong Kong is competitive vs. gas supply to South China region based on LNG imports
Tariff Impact – WEPII Gas Supply

- **Basic Tariff**
  - The additional investment in new gas receiving station and BPPS modification project requires an increase of Basic Tariff by about 0.9¢/kWh in 2013
  - With higher than expected local electricity sales in 2012 and continued stringent cost management, we are able to maintain Basic Tariff unchanged in 2013

- **Fuel Clause Charge**
  - CLP/CAPCO take various mitigating measures in order to minimize tariff impact due to rising cost of gas
  - Due to current price differential between WEPII and Yacheng gas, Fuel Clause Charge in 2013 requires an increase of about 7¢/kWh as a result of higher priced WEPII gas
  - Considering of total fuel costs together with a widening of Fuel Clause Account deficit, we have managed to contain an increase of Fuel Clause Charge to 4.6¢/kWh in 2013
  - Future tariff adjustment is subject to a host of factors including electricity sales, capital investment, operating cost and fuel mix / cost, etc.
Remarks:
Comparison based on average monthly domestic consumption of 275kWh Tariff and exchange rate at November 2012 (CLP tariff excludes Rent & Rates Special Rebate)

CLP 2013 tariff adjustment
Summary

With WEPII gas supply and infrastructure in place, Hong Kong will continue to benefit from:

- Reliable pipeline gas supply replacing depleting Yacheng gas
- Gas supply priced under a clear and transparent mechanism
- Supply resource available to support increasing gas needed to meet future emissions / fuel mix targets