Nationwide natural gas pricing reforms implemented in China

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On 28 June 2013, China's National Development and Reform Commission ("**NDRC**"), the country's national price administration authority, announced city gate natural gas prices applicable in different provincial areas in China effective from 10 July 2013 by issuing *Circular Fagai Jiage [2013] No 1246 on Natural Gas Price Adjustments* (the "**New Pricing Circular**")[1]. City gate prices specified in the New Pricing Circular are set using a market-oriented approach introduced by a natural gas price reform pilot program ("**Pilot Program**") initiated in 2011 that was originally applicable only in the Guangdong and Guangxi areas. Thus, the expansion of the Pilot Program by the New Pricing Circular signals nationwide reform of China's natural gas pricing scheme.

1. Background

Traditionally, China took a cost-plus approach to gas price regulation. Under this approach, the NDRC set field-specific "ex-plant" prices for domestic onshore gas[2] and pipeline-specific transportation fee rates[3]; these were mainly based on gas production costs or transportation costs, plus a designated profit margin. City gate prices in any given area not set by the NDRC directly, were established by the sum of the applicable ex-plant prices and pipeline transportation fees, and therefore depended on the location from which gas was produced and which pipelines were used for transportation to the city gate. Under this pricing scheme the NDRC was not subject to any strict

[1] City gate prices are defined in the New Pricing Circular as the price of gas at the point where downstream purchasers, such as local gas distribution companies, take ownership. The announced prices do not apply to gas for residential use.

[2] "Ex-plant" prices refer to the sum of well-head prices and "purifying" (processing) fees; unlike onshore gas, domestic offshore gas is not subject to government set ex-plant prices. Unless otherwise stated, gas discussed in this article refers to domestic onshore gas production only.

[3] Local provincial price administration authorities may, with the NDRC's authorization, set transportation tariffs for certain locally funded pipelines.

requirements or limits as to the frequency or size of adjustments it could make in either ex-plant prices or pipeline transportation fee tariffs[4].

As China's natural gas pipeline system has grown it has gradually allowed multi-sourced gas supplies through an increasingly integrated pipeline network. Consequently, the NDRC was experiencing increasing difficulty in regulating and supervising gas prices that were dependent on localized gas sources and transportation routes. In addition, China's fast-rising gas demand has resulted in the country's increasing reliance on imported gas[5], whose prices are historically linked to oil prices. As a result of an upward trend in crude oil prices in international markets, gas import prices have stayed higher than domestic ex-plant prices set by the NDRC. Therefore, importers such as PetroChina, have suffered significant losses because they are required to negotiate ex-plant prices with natural gas consumers within the NDRC benchmarks, however they must purchase gas supplies from Central Asia and the LNG market at floating, market prices. The losses incurred by importers due to an artificial ceiling on natural gas prices has contributed to a growing need to reform China's natural gas pricing scheme.

2. Reform

In December 2011, the NDRC initiated the Pilot Program in Guangdong and Guangxi, introducing a new pricing scheme whereby the NDRC would set city gate prices directly. It linked prices to competing fuels with market-determined prices in an effort to utilize a more market-oriented approach. Subsequently, the issuance of the New Pricing Circular in late June this year essentially initiates the implementation of the Pilot Program pricing scheme across all of China.

(1) The new pricing scheme in detail

Under the new pricing scheme, the NDRC sets province-specific city gate prices[6], and gas entering any province is subject to the applicable city gate price set for that area, regardless of the underlying source of gas. This represents a fundamental change in China's natural gas pricing scheme from regulating ex-plant prices on a field by field basis, to setting each province's unified city gate price.

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[4] Although there are the NDRC circulars issued before 2010 which provide for ex-plant price adjustments on an annual basis and an 8 per cent cap on yearly adjustments, in practice the NDRC does not seem to have followed these rules. Between 2005 and 2010, for example, the NDRC adjusted ex-plant prices only three times.

[5] According to the NDRC's statistics, China's gas consumption increased from 24.5 billion cubic meters in 2000 to 107.5 billion cubic meters in 2010, representing an average annual increase of 15.9 per cent; China's gas imports have increased similarly, rising from 4 billion cubic meters in 2007 to over 42 billion cubic meters in 2012. By 2015, annual gas consumption and gas imports are estimated to reach 230 and 93.5 billion cubic meters respectively.

[6] City gate prices set under the new pricing scheme apply to domestic onshore gas and imported pipeline gas. Domestic offshore gas, whose ex-plant prices are unregulated (see footnote 2), is not subject to these NDRC-set city gate prices.

Under the new pricing scheme, Shanghai is designated as the price reference point for China's other provinces. Its city gate price is linked to imported fuel oil (60% weighting) and liquefied petroleum gas (40% weighting) in accordance with a specific formula which takes into account calorific differences and includes a 15% discount to encourage gas consumption.

City gate prices applicable in other provinces are then set based on the Shanghai city gate price, taking into consideration factors such as transportation costs between Shanghai and the other provinces. This is similar to the way much US gas is priced plus or minus on margin to Henry Hub.

In addition, city gate prices set under the new pricing scheme are implemented as price caps, i.e. the price agreed in a given gas sales agreement may not exceed the applicable city gate price in the province where the gas is destined, however it could be lower.

In order to minimize the effect of the new pricing scheme on existing gas users, the New Pricing Circular distinguishes between gas purchased that does not exceed the corresponding quantity level in 2012 (the "**Base Volume Consumption**") and the excess over the 2012 level (the "**Incremental Volume Consumption**") for particular city gate prices.[7] While each province's city gate price for Incremental Volume Consumption is set by the new pricing scheme, there will only be gradual adjustments for Base Volume Consumption, with a view of achieving a full application of the new pricing scheme to all gas sales by the end of 2015.

Furthermore, the New Pricing Circular is silent on how often the NDRC should adjust city gate prices under the new pricing scheme. We understand from our consultation with the NDRC that they expect price adjustments on at least an annual basis after the new pricing scheme becomes fully applicable to Base Volume Consumption.

(2) Application to unconventional gas (coal bed methane, shale gas and coal gas)

Ex-plant prices of coal bed methane ("**CBM**") have long been unregulated, i.e. they are open to free negotiation between producers and purchasers, rather than being set by the government. This hypothetically results in freely negotiable CBM city gate prices. The New Pricing Circular reiterates this position; however, it also provides that where CBM sold into a province cannot be separated from regulated gas[8], such CBM will be subject to the city gate prices set for that province in the New Pricing Circular.

We understand from our consultation with the NDRC that currently they generally consider CBM sold by a pipeline owner and mixed with regulated gas as inseparable

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[7] The NDRC estimates that aggregate Incremental Volume Consumption will amount to 11 billion cubic meters in 2013, accounting for 9 per cent of the total annual gas consumption with aggregate Base Volume Consumption standing at 112 billion cubic meters.

[8] Regulated gas includes domestic onshore gas and imported pipeline gas (see foot note 6).

from the latter, and the following examples discussed with the NDRC may further illustrate this position:

Scenario one: a CBM producer selling CBM to a pipeline owner.

(i) the selling price (i.e. ex-plant price) is open to negotiation between the producer and the pipeline owner; and

(ii) when the pipeline owner subsequently sells the CBM it purchased from the producer to a downstream purchaser in a given province :

- if the CBM is to be moved by a pipeline which also transfers regulated gas simultaneously, then they are considered as inseparable and the city gate prices applicable in the province shall apply as between the pipeline owner and the downstream purchaser; and

- if the CBM is to be moved separately (e.g. by a CBM-only pipeline), then the province's city gate prices set in the New Circular will not apply, and the pipeline owner and the downstream purchaser are free to agree upon the price.

Scenario two: a CBM producer selling gas directly to a downstream purchaser in a given province.

(i) the selling price (essentially a city gate price) is open to negotiation between the producer and the purchaser, i.e., the province's city gate prices set in the New Circular will not apply; and

(ii) the producer must pay a pipeline company to transfer the CBM to the province and the relevant pipeline transportation fee rates set by the NDRC will apply.

The above illustrations apply to CBM, shale gas and coal gas.

3. Conclusion

China's natural gas pricing scheme has moved from regulating field-specific ex-plant prices to setting city gate prices for each province following the nationwide pricing reforms implemented by the New Pricing Circular. The new scheme provides for a more market-oriented pricing mechanism, linking city gate gas prices to imported competing fuels. This should help bring domestic gas prices in China more in line with international levels and reduce losses suffered by gas importers. Potentially, the reforms may help encourage increased gas imports and domestic gas exploration and production in the long term, which will be crucial to enabling China to meet its rising internal gas demand.