

Sub Group 2 Gas Price Formation and Trends

Terms of Reference



1. Price Indexation
 - a) Assess the alternative methods for indexing wholesale gas prices (oil, spot gas price, coal, etc.) (Sept 2013)
 - b) Assess their impact on power generation baseload choices (Sept 2013)
2. State Involvement in Wholesale Prices
 - a) Acknowledge Government / regulatory involvement in wholesale prices in consuming and producing countries. (March 2014)
 - b) Assess the true extent of subsidies (Sept 2014)
3. Traded Gas Markets and Contracts
 - a) Assess the conditions required for fully traded gas markets (Sept 2013)
 - b) Assess the recent contracting trends (March 2013)
4. Wholesale Gas Price Survey (March 2013, 2014, 2015)
5. Globalisation of Gas Prices (Sept 2014)



1. Price Indexation

a) Assess the alternative methods for indexing wholesale gas prices (oil, spot gas price, coal, etc.)

- Oil, Spot Gas, Coal, Final products – aluminium, electricity, methanol
 - Mix of fuels in country - big changes in recent years, renewables, Gas on Gas competition
 - Acceptability of price reference – how liquid is the market for the reference price
 - Producers looking for LTCs – alternative fuels
 - Review mechanisms important in LTCs
- Indexation
 - Are any indices sustainable in a liquid trading market?
 - Regional differences in indexation
 - Impact of big transportation projects on pricing
 - Local markets as opposed to international markets
 - Base price issue or indexation
- Link to wholesale price survey results

1. Price Indexation

- b) Assess their impact on power generation baseload choices
 - Price level issue and/or price formation issue
 - Electricity Market
 - Is electricity traded and price is important or is electricity generation determined by state mandate
 - Does electricity make the price or take the price? Share of renewables? Impact back on the gas price from electricity generation variability
 - Impact of renewables and subsidies
 - Market structure and market maturity – some markets are in transition
 - Carbon schemes in place – ETS / carbon tax / levies on scarce resources
 - Build on competing fuels analysis
 - *Link with SG1 – Supply, Demand and Trade*

2. State Involvement in Wholesale Price

a) Acknowledge (?) Government / regulatory involvement in wholesale prices in consuming / producing countries

- *Acknowledge should mean assess / understand*
- Consider particular country cases
 - Spain
 - Pakistan
 - Venezuela
 - Algeria (*presentation in March 2013*)
- Isolated countries without any imports and/or exports
- To what extent is there government interventions between wholesale and end user price
- Link to wholesale price survey results
- *Link with SG3 – Corporate Strategy and Regulation*

2. State Involvement in Wholesale Price

b) Assess the true extent of subsidies

- How is subsidy defined – opportunity cost or actual cost
- Subsidy at what level – wholesale, end use
- Is there differential pricing between sectors
- What is driving force behind the subsidies?
 - Giving wrong signals to the producers and new market players
 - Gas price related to electricity price which may be regulated or held down
- To what extent does imports coming in expose the issue
- Link to wholesale price survey results

3. Traded Gas Markets and Contracts



a) Assess the conditions required for fully traded gas markets

- Measuring trading liquidity properly
 - Appropriate use of churn rates
 - Is there a right churn ratio?
 - Where are the flaws at the moment
 - Role of financial players as measure of traded market
 - Importance of absolute hub / market size credibility
 - How many hubs in a market area such as Europe for example
- Link with wholesale price survey results
- Role of market liberalisation
- US/UK as case studies of traded market development
- Malaysia as case study of market in transition
- *Link with SG3 – Corporate Strategy and Regulation*

3. Traded Gas Markets and Contracts

b) Assess recent contracting trends

- Items to consider
 - Price
 - Volumes
 - Duration
 - Delivery points
- Pipeline
 - Europe
- LNG
 - Europe
 - Asia
 - Latin America



4. Wholesale Gas Price Survey

Continue surveys from previous triennium

- 2005, 2007, 2009, 2010
- Any changes to approach?
- 2012 survey early in January based on very provisional consumption/production/trade data
- Repeat for 2013 and possibly 2014

5. Globalisation of Gas Prices



- Conclusions of previous triennium
 - Analysis of price convergence / divergence
 - Integrating regionalised markets
- Link with OIES book on “The Pricing of Internationally Traded Gas” – 3 conditions for establishing global price linkage
 - Existence of infrastructure to enable gas to move between regional markets and of sufficient volumes of flexible or divertible gas
 - Creation of supply chains which allow the diversion of flexible gas supply between regional markets in response to supply-demand imbalances and price disparities
 - Motivation and ability of one or more of the three key agents - producer, midstream utility, end user - in an existing regional gas supply chain to move away from oil indexed contracts to hub based pricing. What about the Government /regulatory involvement?
- Fourth condition would be trading liquidity – see earlier slide and emergence of portfolio / trading companies
- Sustainability of hybrid pricing models
 - Reality at moment in Europe
 - Long term contract not the issue but the pricing within that