

Highlights from the Second IEA-IEF-OPEC Symposium on Gas and Coal Market Outlooks

First G20-IEF Gas Market Dialogue

Acapulco | 11 November 2014



Zack Henry
International Energy Forum

Contents

- 1. Event Overview**
- 2. Two Years Later: What's Changed in the Global Energy Dialogue on Natural Gas?**
- 3. Key Takeaways from the Second IEA-IEF-OPEC Symposium on Gas and Coal Market Outlooks**

Contents

1. Event Overview

2. Two Years Later: What's Changed in the Global Energy Dialogue on Natural Gas?

3. Key Takeaways from the Second IEA-IEF-OPEC Symposium on Gas and Coal Market Outlooks

The Call for Dialogue on Gas and Coal

November 2011

The G20 Cannes Summit Leaders' Declaration called for
**“continued dialogue between producers and
consumers on short-, medium-, and long-term outlook
and forecasts for gas and coal.”**


October 2012: The First Joint Symposium



Event Summaries to Sustain the Dialogue

EVENT BRIEF



 AN INTERNATIONAL ENERGY FORUM PUBLICATION

17 OCTOBER 2012

FIRST IEA-IEF-OPEC SYMPOSIUM ON GAS AND COAL MARKET OUTLOOKS

PARIS, FRANCE | 4 OCTOBER 2012

MAIN DISCUSSION TOPICS AND FINDINGS

CONTENTS

1. Event Background	2
2. Overview	2
3. Main Uncertainties and Challenges Facing the Gas Market	2
4. Shale Gas Developments	3
5. Gas Pricing Mechanisms (oil-linked contracts versus hub-indexed prices)	3
6. Market Data Availability: Extension of JODI to Gas	4
7. The Role of Coal In Global Energy Mix	4
8. Financial Regulation In Gas and Coal Markets.	5

KEY INSIGHTS

- Coal and gas together account for almost half of the world's total primary energy consumption.
- Current global gas and coal resources are sufficient to meet future demand through 2035 under virtually any forecast scenario.
- In contrast to oil, the global nature of gas and coal markets is limited – as only one third of gas and around 15% of coal consumption are traded internationally.
- Doubts persist over whether or not the world will experience a “golden age of gas”.
- China has little alternative but to expand coal use in the power sector, at least in the near- to medium-term. The dragon's flame is coal-fired.
- Greater data transparency in gas markets would help reduce speculation and encourage investment based on sound analysis.
- Regulatory reform efforts in the financial and derivatives markets must strike a delicate balance between increasing transparency and preserving liquidity levels.
- Additional dialogue is required to find common ground around the gas pricing mechanisms debate.
- At present, there is a fair amount of confusion in the market: US coal exporters are confused; policymakers in Brussels are confused; if the Japanese phase out nuclear, then this may spark still more confusion.



Joint IEA-IEF-OPEC Report

on the First Symposium on Gas and Coal Market Outlooks

Paris
4 October 2012

Contents

1. Event Overview
- 2. Two Years Later: What's Changed in the Global Energy Dialogue on Natural Gas?**
3. Key Takeaways from the Second IEA-IEF-OPEC Symposium on Gas and Coal Market Outlooks

Tracking the Energy Dialogue on Natural Gas: Key Observations, Questions and Insights from October 2012

October 2012

- 1) **Asia Pacific** will drive future **natural gas demand**.
- 2) An **integrated global gas market** is not likely in the near term.
- 3) The logic for establishing a **regional gas-pricing hub in Asia** is questionable.
- 4) **Oil-indexation of gas prices** has clear merits, but some sellers have won business by applying a more flexible formula.
- 5) It is **difficult to talk about gas in isolation** because of its links to electricity, coal and renewables.
- 6) **Destination clauses in LNG contracts** are ironclad and non-negotiable.
- 7) There **are conflicting messages about gas in the marketplace** (clean fuel versus fracking concerns).
- 8) Companies entering **into joint ventures with US-based unconventional players** will benefit from technology transfer, accelerating the spread of the unconventional revolution.
- 9) In the wake of the **Fukushima disaster**, **Japan will cease using nuclear power** indefinitely.

Then and Now: What Has Changed in the Global Energy Dialogue on Natural Gas?

October 2012	October 2014
<ol style="list-style-type: none"> 1) Asia Pacific will drive future natural gas demand. 2) An integrated global gas market is not likely in the near term. 3) The logic for establishing a regional gas-pricing hub in Asia is questionable. 4) Oil-indexation of gas prices has clear merits, but some sellers have won business by applying a more flexible formula. 5) It is difficult to talk about gas in isolation because of its links to electricity, coal and renewables. 	<ol style="list-style-type: none"> 1) Unchanged. 2) Unchanged, though talk has begun of a possible LNG spot price. 3) Unchanged, though several countries continue to push for this. 4) Unchanged, with the trend towards greater flexibility on the part of LNG exporters. 5) Unchanged, though gas is more a complement than a competitor.
<ol style="list-style-type: none"> 6) Destination clauses in LNG contracts are ironclad and non-negotiable. 7) There are conflicting messages about gas in the marketplace (clean fuel versus fracking concerns). 8) Companies entering into joint ventures with US-based unconventional players will benefit from technology transfer, accelerating the spread of the unconventional revolution. 9) In the wake of the Fukushima disaster, Japan will cease using nuclear power indefinitely. 	<ol style="list-style-type: none"> 6) Changed: European Commission ruling, greater exporter flexibility. 7) Changed: gas has gained prominence as a clean fossil fuel. 8) Changed: geology is so different from play to play within the US that the transfer of knowledge to China and beyond is not so straightforward. 9) Changed: Japan likely to bring some nuclear back on line in 2015.

Contents

1. Event Overview
2. Two Years Later: What's Changed in the Global Energy Dialogue on Natural Gas?
- 3. Key Takeaways from the Second IEA-IEF-OPEC Symposium on Gas and Coal Market Outlooks**

Key Takeaways: Second Joint Symposium on Gas and Coal

- There is an **apparent discrepancy between short/medium-term outlooks and long-term outlooks** regarding expected gas demand levels.
- A **bright future for gas is not guaranteed**, as economic facts are stubborn.
- **Asia is expected to be the major battleground** for gas versus coal competition. Will we see **cheaper gas** and more expensive coal in Asia?
- **China's gas production *vis à vis* its LNG demand** is a key variable to watch.

Key Takeaways: Second Joint Symposium on Gas and Coal

- To a great degree, **transportation constraints** provide structure to oil, gas and coal markets.
- **Carbon capture and storage** appears to be an orphan in the world.
- The reality is that **the world is going to keep burning coal**.
- The **interdependence** of fuels remains robust:
 - Impact of falling oil prices on gas demand and on unconventional production;
 - Degree to which coal may displace oil and gas;
 - Implications of a nuclear restart in Japan on other fuels.