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## DAY TWO – THURSDAY 5TH DECEMBER 2013

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### Theme II – Professional Services: Legal and Financial

*Examining the capacity of Lebanese banks and Legal firms to handle the major IOC and contractors' accounts and provide a complete set of financial and Legal services according to international standards.*

#### **9:00 Session five – Banking and Insurance Services**

*A look at the international standards in providing banking and financial services to Service providers in the oil and gas industry, and the capabilities and willingness of Lebanese bankers to contribute to the development of the industry according to international standards*

**Session Chairman: Mr. Wissam Al-Zahabi** - Board Member - Head of Economic and Financial Department, **Petroleum Administration, Lebanon**

#### **Speakers**

- 1- **Mr. Gavin Greenway**, Project Finance Director, **Europe Arab Bank**
- 2- **Mr. Fadi Assali** - CFA, Founder & Co-CEO, **CEDRUS Invest Bank**
- 3- **Mr. Joe Baddour**, Assistant General Manager, **BLC Bank**
- 4- **Mr. Georges Kabban**, Chief Executive Officer, **United Insurance Brokers (DIFC) Ltd.**

#### **10:30 Coffee Break**

#### **11:00 Session six – Legal issues - The service contract**

*Emphasizing the contracting relationship between IOCs and Service companies, with an overview of the legal and commercial structure of the Service contracts.*

**Session Chairman: Rayan Kouatly**, Managing Director, **Kouatly Law Firm**

#### **Speakers**

1. **Dr. Fadi Moghaizel**, Senior Partner, **Moghaizel Law Firm**
2. **Me. Mohammad Alem**, Founder and managing partner, **Alem & Associates Law Firm)**
3. **Me. Omnia Wahid**, Senior Legal Counsel, **Dana Gas PJSC**

### Theme III- Market perspective

*Fitting Lebanon in the regional "Jigsaw Puzzle" within ever changing markets*

#### **12:30 Session seven – Market updates**

*An update on the latest developments in the local, regional and international oil and gas markets*

**Session Chairman: Dr. Naji Abi Aad**, Energy Economist / Senior Advisor - **Petroleb**

#### **Speakers**

1. **Dr. Carole Nakhle**, Energy Economist - director, **Crystol Energy Ltd.)**
2. **Dr. Christian Panzer**, Energy Policy Expert, **Vienna University of Technology**

# Market potential of Lebanon's oil and gas production and implications from international developments

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## Content

- The global energy development
- Status quo of regional objectives
  - Political framework conditions
  - Domestic energy resources
- Market linkages and (mutual) interplays
- Lebanon's energy situation
- Market potentials of Lebanon's oil and gas industry

## Europe

- *20% renewable* energy sources by 2020
- *20% greenhousegas emission reduction* by 2020
- *20% energy efficiency* measures by 2020
- *Expected continuation* of level of ambition *beyond 2020 and 2030*
- *High import dependence* in coal, oil and gas - *53.5%* of its *energy* in 2011 (83.5 % in oil, 64.2% in natural gas and 22% in coal)
- *Renewable energy potential about 45 to 50%* of expected energy demand in 2030
- *Phase out of nuclear* - significant *infrastructure adaption* required
- *Support scheme design* of renewable energy sources *adjusted* in order to cope with volatile characteristics
- Emission Trading Scheme (ETS) almost out of operation - 3.2 to 5 USD/tCO<sub>2</sub>

## *Arabic Gulf region*

- *Strong power demand increase* - 56% in the last decade due to demographic increase
- *Power generation* in the *MENA* region largely depends on *fossil fuels*
- *Subsidized energy prices*
- *Large proven resources of domestic oil and natural gas*
- *Only 40%* of Saudi Arabian's gas resources are *non-associated*
- Expected future *power demand* could *turn some Gulf countries* to *net importer of natural gas* within the next 20 years
- *Qatar limits its natural gas export by a national referendum*
- Holding *high* renewable electricity generation (*RES*) *potentials, especially for solar power generation (CSP)*
- *Large proven reserves of unconventional in Saudi Arabia* - 2,000 times the annual natural gas production of 2012

## *United States and Asia*

- *US energy consumption dominated by fossil fuels*
- *No common agreement on renewable targets* - national targets
- *Electricity sector 51.5% of coal in 2000, 44.5% in 2010 -  
natural gas 16% in 2000, 24.1% in 2010*
- *Total US coal production stabilized in same period (~1,100 MTS)*
- *Nuclear phase out in Japan* (postponed)
- *China significant energy demand increase* - 50% from 2004 to 2010
- *Coal dominates electricity sector by 80%* - only limited coal imports
- *Gas demand tripled from 2000 to 2008*, at a very low level
- *China's gas import dependency* expected to increase to 62 - 73% in 2030
- *China's shale gas potential equals 70,000 Mtoe (70% of domestic unconventional gas; same quantity as US)*

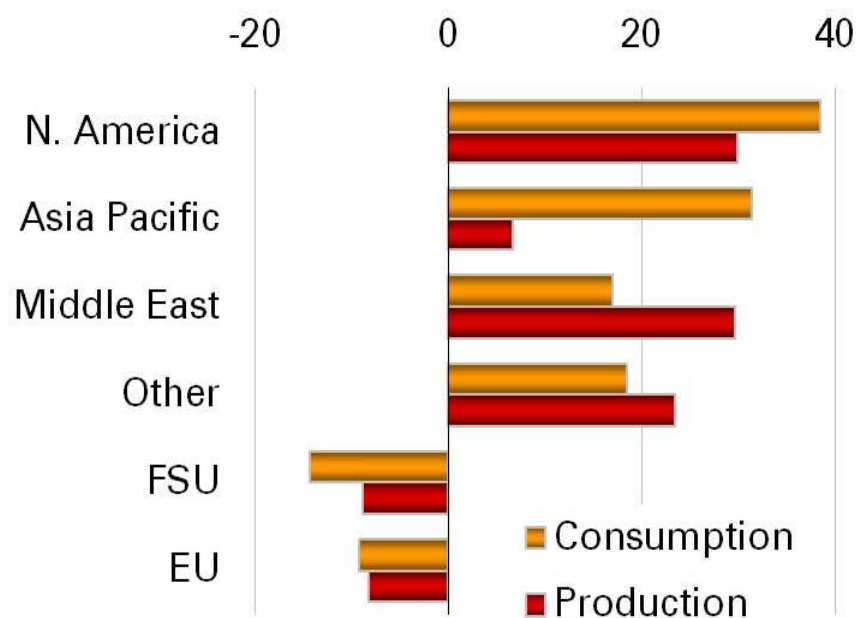




# Global natural gas balance

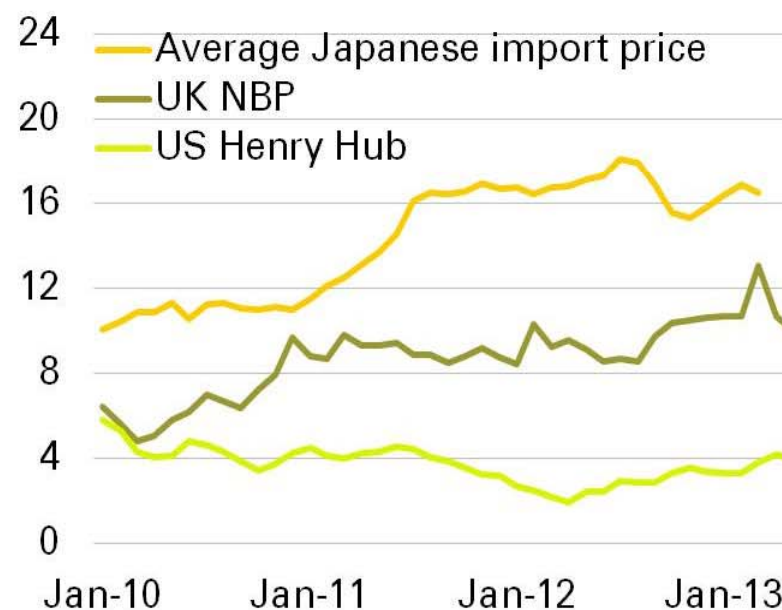
## Global growth in 2012

Annual change, Bcm



## International gas prices

\$/mmBtu



Source: includes data from ICIS Heren Energy and Energy Intelligence Group

BP Statistical Review of World Energy

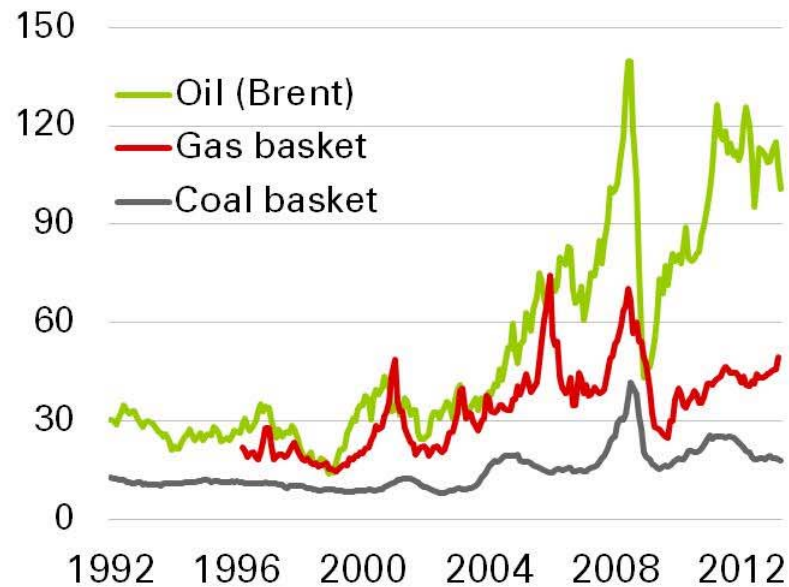
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# Energy prices

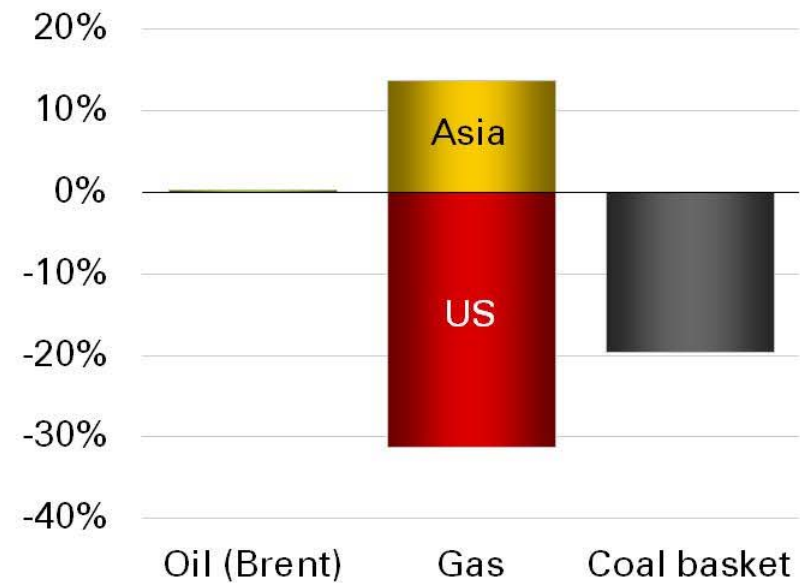
## Inflation adjusted prices

\$2012/boe, monthly



## 2012 price changes

Annual change, %

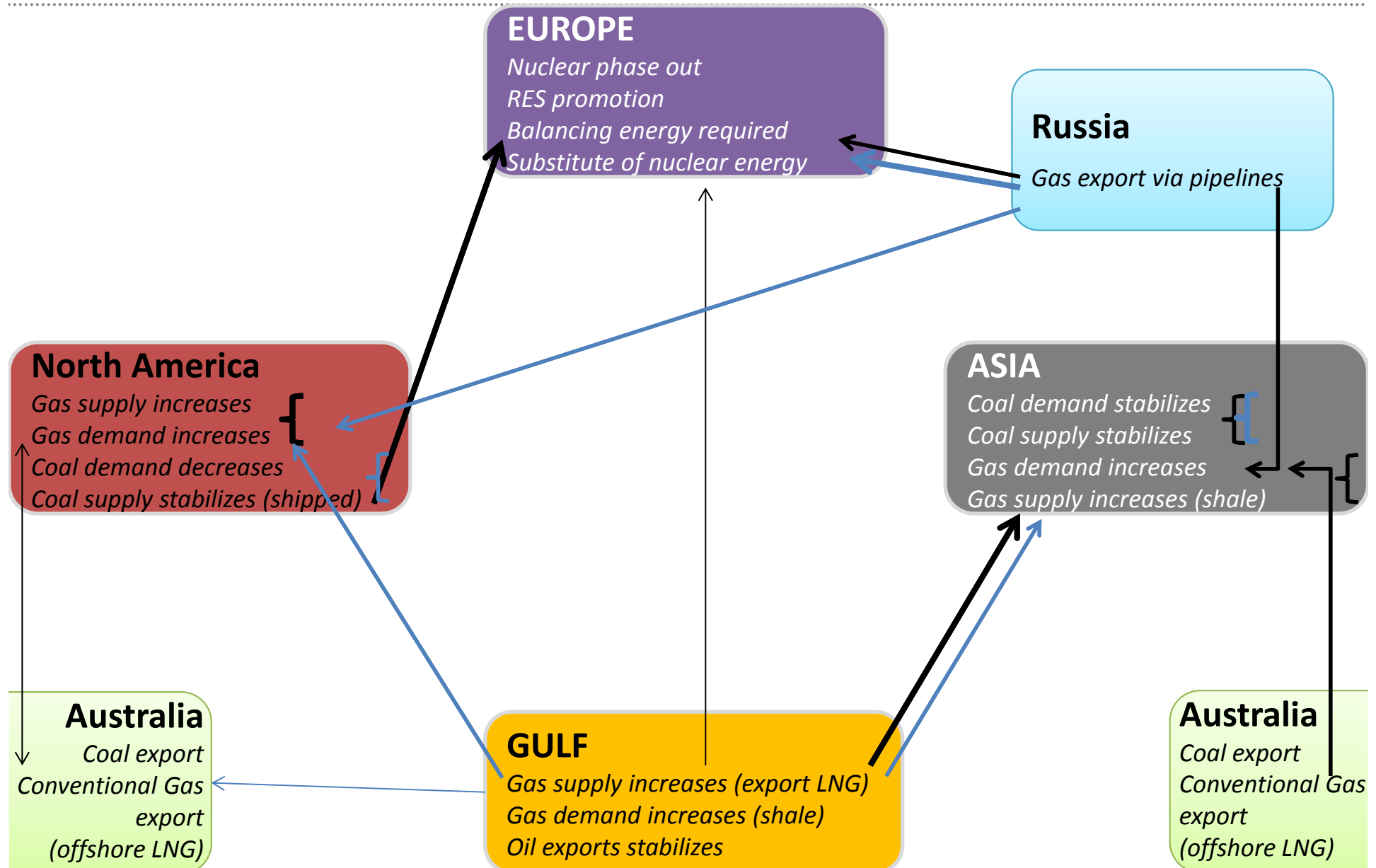


Source: includes data from ICIS Heren Energy and Energy Intelligence Group, McCloskey and Platts

BP Statistical Review of World Energy

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- *Arabic Gulf*
  - Finance national social welfare systems
  - Keep energy prices at reasonable level
- *Asia*
  - Energy security - secure increasing energy demand
  - Develop national energy resources (coal / unconventional gas)
- *North America*
  - Increase industrial competitiveness
  - Develop energy self sufficiency - technology development (learning)
  - Shareholder interests of energy companies (double-digit dividends)
- *Europe*
  - Combat climate change
  - Diversify supply portfolio



- *Cost effective* exploitation of *shale gas* - especially in *North America* - *Decreasing gas prices* (Henry Hub) - LNG (partly) links national markets
- *No intention to export* large quantities to other markets (*competitiveness of domestic industry*)
- European energy strategy supported by high *financial incentives*
- Renewable energy (volatile character) requires back-up power
- Large coal investments noticed since coal and CO<sub>2</sub> prices are low
- Increasing *gas imports in Japan and China* - stabilize demand for GCC and Russia - important income for social welfare system
- *Increasing domestic demand in GCC* - unconventional gas in Saudi Arabia attractive
- *LNG terminals ... linking markets*
  - Enabling flexible and spontaneous allocation of gas resources
- *Unconventional gas* and *LNG transport* systems *impact* currently built and planned operation of *gas pipelines* significantly

- Lebanon holds no proven gas reserves
- **Hardly** any gas infrastructure system ... but ongoing plans
- Power sector: 2 CCGT but **not in operation** due to gas shortage
- Imports from Syria and Egypt – but too little historical quantities –  
currently no imports from those countries
- Hydro carbon reserves identified of 336-700 bcm  
(Lebanon / Levant Basin) - **no drilling yet**
- **No licensing yet** – long time delay
- Difficult to attract foreign investors in case of long-term time delays  
generally still attractive investment frameworks

- High expectations of natural gas reserves in Levant Basin within Lebanese sea rights
- Starting the production today implies **exploiting** by around 2020
- Due to international development **oversupply** in **global** gas markets
- Levant Basin difficult technical characteristics - **higher costs**
- Higher costs would need to compete with established gas exporters
- Option to serve **domestic market** - requires inland infrastructure
- General oversupply requires **other options**:
  - GTL
  - Domestic supply for power / petrochemicals / households
- Oil: Limited expectations, otherwise two refineries in Lebanon

### *How to secure domestic energy demand?*

- Short term:
  - Floating LNG terminal (regasification) installed within 15 months
  - Lebanon LNG imports at price level in EU and Asia
- Long term:
  - Licensing of domestic reserves
  - Development of national infrastructure

### *How to exploit domestic potentials - market for exports?*

- Licensing and drilling activities in order to prove domestic resources
- Synergies at Levant Basin with neighboring countries
- LNG terminal (Liquefaction) on Lebanese costs
- Export petrochemicals and other items of higher quality (value added chain - inland)



# Thank you for your attention!

## Contact

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