7 November meeting

A summary of remarks

Session 1: Oil prices

Global demand is continuing to rise. Demand is always slightly lower in the first half of the year compared to the second half, which is boosted by winter. Demand is likely to be close to 91 Mbd in the second half of 2013.

In 2012, non-OPEC growth was driven by North America. The increase in North American crude supply is almost sufficient to balance demand growth. Demand in most other countries is contracting. OPEC is suffering. There are significant variations in supply year to year. Geopolitical events are having a major impact on OPEC supply: the Libyan conflict, sanctions in Iran, West African outages, Saudi Arabian adjustments to balance the market. In 2013 and 2014 we can expect an increase in supply in North America but not East of Suez. Supply contracts are stagnating in the Middle East. The supply of sweet light crudes is increasing, but this is not the case for sour heavy crudes. Tight oil production is expected to rise to over 5 Mbd by 2030.

In the next few years, there is likely to be stagnation in demand and refining activity, but a sharp rise in the Atlantic Basin, moving the region to a net surplus. East of Suez, demand and refining capacity will rise rapidly but regional growth in supply will be limited. The region will move to a net deficit.

The growth in sour crude supply in the Middle East will be lower than sweet growth globally (mostly from the USA). Surplus from the Atlantic Basin will move to Asia: from Latin America (notably Venezuela), West Africa (notably Nigeria), the Middle East and North Africa, from Russia and Central Asia, by pipeline.

The Brent-Dubai price spread will adjust to allow crude to flow to the East of Suez.

There is steady growth in the futures trading of crude and products. The futures trade volume was 1.8 B (Billion) barrels per day in 2012, i.e. 23 times the physical market. Product trade liquidity is rising while crude trade volumes are flattening out. From 2006 to 2010 rising prices were in contango, whereas now there are in backwardation. East of Suez we have moved from a surplus to a shortage. There are concerns about forward supply due to rising costs and OPEC/non OPEC uncertainty. Consumers are hedging (they are slow). Prompt supplies are plentiful due to OPEC. 2011 – 2013: stable prices and backwardation. There are concerns about an easing off in forward supply. Producer hedging is accelerating. Prompt supply is tight due to the situation in Iran and Libya.

Supplies are declining significantly, driving the need for new capacity. But new resources are more complex and more expensive. Access to resources is a key factor limiting development. Oil prices are supported by limited spare capacity, global tensions and increasing E/P costs. E/P cost inflation is more than 10% per year.

Surging North American production has depressed the WTI price. US domestic prices are starting to disconnect - again - from international prices. Canadian heavy crude discounts have steadily increased as volumes rise. Backwardation in international crude prices is mechanically sustaining the Brent-Dubai spread, but for how long?

The discussion then moved to the regulation of markets. It is important to remember a significant meeting held in Jeddah in June 2008 (Jeddah Oil Summit). The meeting was initiated by Saudi Arabia in cooperation with major consuming countries, very concerned at the time by the rapid and huge increase in prices (from $100/b in January to $147 in July a few weeks after the Summit). Two other important meetings also took place:

- December 2008: London Oil Summit
- November 2010: London - OPEC- IEA - IEF high level technical Workshops.

Several reports were prepared examining the oil markets and their evolution:
-"Understanding the New Dynamic: How do the Physical and Financial Markets for Energy Interact"
-"Energy Market Regulation: Clarity and Coordination" November 2011 & November 2013 – Vienna: "Interactions between Physical and Financial Energy Markets".

In November 2010 - G20 Seoul - the intention of leaders to "mitigate excessive fossil fuel price volatility" led to them requesting "the IEF, IEA, OPEC and IOSCO to produce a preliminary joint report on how the oil spot market prices are assessed by oil price reporting agencies ("PRAs") and how this affects the transparency and functioning of oil markets".

In October 2011: the "Oil Price Reporting Agencies Report" by IEA, IEF, OPEC and IOSCO to G20 Finance Ministers was issued. In October 2012 the IOSCO "Principles for Oil Price reporting Agencies" were published.

In October 2013: "Argus is supposed to successfully complete independent assurance review recommended by IOSCO". According to some participants and regarding Oil Price Formation "the job is done". According to some specialists the role of Price Reporting Agencies in linking Physical and Financial Markets has been understood. We have to watch out for the possible regulation of Price Indices following the LIBOR investigation (EU).

Still according to some specialists and regarding Credit Risk, "the job is done": Clearing and bilateral Margining of OTC Derivatives transactions become the norm (watch for financial strength of Central Clearing Counterparties).

However some questions remain open: How not to be a Swap Dealer (US) or an Investment Firm (EU)? Is it possible to trade derivatives with a US Counterpart? Are we sure the Trading Venues you use will not expose us to unwanted regulatory burden? We have to watch out for possible segmentation of the market (US vs ROW?) What will the future be for International Banks' Commodities Businesses?

Capital Adequacy Constraints favor specific activities (High Frequency Algorithmic Trading & Collateralized Financing of Mid-Stream Infrastructures). There is a risk of a possible drop-of in Derivatives Market Liquidity and the future of HFT Regulatory Oversight is still unclear.

According to another participant we have several misconceptions of the market:

Misconception 1: Financialization /Speculation are Clearly Defined Concepts. Very often they are not.

- More than one concept circulating with no clear definition
  - Financialization
  - Speculation
  - Manipulation
  - Terms often used interchangeably
- Financialization could mean
  - The role of financial layers in the oil price formation/discovery process
  - The impact of financial players (i.e. those with no interest in the physical commodity) on oil price movements
  - The integration of oil markets with other financial markets
- Speculator
  - Someone who is willing to take risks in anticipation of making a profit; takes the opposite position to a hedger; necessary function
- Manipulation/squeeze: Punishable by law.

Misconception 2: Oil prices suffer from excessive volatility, especially when compared to other Commodities Markets. Not true.

Misconception 3: It is possible to isolate physical benchmarks from financial layers. But financial layers are essential to the oil price discovery process. It is no longer possible to isolate physical from financial layers in the current oil pricing system. Information derived from financial layers is essential for identifying the benchmark price level. Regarding the Brent market, the price of Dated Brent is assessed using information from many layers, including CFDs, forward markets, EFPs and futures markets.

Misconception 4: Financial players/speculators constitute a homogenous group and have a uniform approach to oil market fundamentals. We should differentiate:

- Investment banks / Swap dealers
  - Largest traders in oil since the collapse of the OPEC administered pricing system in 1986
  - More involved in bridging gaps between producers and a more diverse set of customers
- Hedge funds
  - Macro hedge funds
    - Trade in a range of markets (not just commodities)
    - Have a top-down approach and take a view with respect to macroeconomic issues
  - Specialist commodity hedge funds
    - Bottom-up approach, use large quantities of data; take a strong view with respect to the fundamentals of supply and demand

    - 'Black box' hedge funds
        - Have a view of the oil price based on calculations known only to themselves
- Algorithmic Trading (AT) and High-Frequency Trading (HFT) traders:
    - Use an automated order execution methodology; once the system has been developed and deployed, human intervention is not required to operate these systems; exploit small pricing anomalies or express short-term views
- Institutional investors primarily consist of pension funds, insurance companies, sovereign wealth funds
    - Typically put a small share of their funds into commodities for the sake of portfolio diversification
    - Tend to sell when prices are high and buy when they are low, stabilizing the market, owing to limits in their portfolios
- Retail investors, including private investors and high net worth individuals
    - one of the fastest growing categories.

Misconception 5: Correlation implies causality.

- Increased price co-movements between equity, bond and oil returns
- Increased correlation between exchange rates and oil prices
- Increased price co-movements between non-energy and energy commodity returns
- Correlation between index commodities is higher than those for commodities outside index.

Misconception 6: Spot Prices should not reflect market expectations

- Peck (1985):
    - "Expectations are reflected nearly equally in current and in futures prices. In this sense cash prices will be nearly as good predictions of subsequent cash prices as futures prices"
- Working (1942) was critical of the
    - "general opinion among economists that prices of commodity futures are ... the market expression of consciously formed opinions on probable prices in the future" whereas "spot prices are not generally supposed to reflect anticipation of the future in the same degree as futures prices"
    - Specifically criticized the error of "supposing that the prices of futures ... tend to be more strongly influenced by these anticipations than are spot prices".

Why should political events in the Middle East impact oil price movements?

- Market analysts update their probabilities based on new information
- This is reflected in price movements even if no physical disruption takes place
- Case of Syria
    - Military attack could create regional spillovers & risk of disruption is higher
    - Analysts update their probability of supply disruption
    - Would be reflected in spot/futures price movements
    - Reflects a market efficient at incorporating information
    - Indicates that markets are becoming more mature
- Let's assume the opposite case:
    - Military attack on Syria, but the price does not react to this new information
    - Is the market being efficient?
    - Should the market not update its perception of risk because no new supplies were lost?

Misconception 7: More regulation is the solution

- We need to ask ourselves: The solution to what type of problem? What market failure are we trying to correct with regulatory efforts?
  - High prices or price volatility or both?
  - Protecting consumer welfare?
- Does investment in commodities pose systemic risk?
- Many types of regulation: micro-prudential, market prudential or systemic
- No free lunch: Be aware of unintended consequences
  - Low liquidity increases the cost of hedging for physical players

A reduced number of players is not desirable

The oil pricing system suffers from many weaknesses. The pricing system is 'a sick patient' in need of constant maintenance. Maintenance is carried out by PRAs. There are strong vested interests in maintaining the current oil pricing system by all players.
Could the current system be prone to manipulation? It could be; but there is not yet any evidence of this.

The price of oil depends on two important parameters: the long-term marginal cost and the price necessary to balance the budgets of the largest producing countries (Middle East, Venezuela, etc.). Some variations in the prices cannot be explained and the price of oil is probably a bit higher than is the level required to run the oil industry properly. So a commission could be set up to make recommendations regarding the "fair price of oil" – which does not mean that the market is not needed.

ENI proposed a kind of fixed price system some years ago. Fixing the price should be the role of the producers. "I want to know the price at which I want to sell my crude". In the past it was possible for producing countries to set prices. This is not possible any more. The market is much more complex now than it was in the past. Is it possible to regulate the price without regulating supply and demand?

The overall level of prices is very important but we should not forget differentials, which provide a synthesis of huge quantities of information. Saudi Arabian regional prices ensure that Saudi crude is competitive in each market.

The discussion continues on the fairness of prices. Are we talking about prices or rent distribution. There is good volatility (changes in supply / demand) and bad volatility (manipulation).
Little information about emerging countries is available. There has been some improvement following the development of the JODI (Joint Oil Data Initiative) by the IEA. For instance, China has increased from four to a few hundred the number of employees in charge of data collection. It is difficult to keep up with changes in the market. The Caribbean has become a major storage area but there is limited transparency about what happens there.

Prices are not perfect. Nobody controls the market. A financial shock will not affect the price as much as a supply shock. Are PRA manipulating the prices? No, according to some participants. Some speakers also stress the importance of product prices.

There is a need for flexibility. The prices of air tickets can vary. I can buy a ticket today for use in 3 months. This could be done on the oil market.

In summary, the situation regarding control/regulation of oil prices is as follows: in France we create a structure with Polytechnicians; in the US they produce thousands of pages of regulations. It is the same in Brussels, but understanding of the oil market is sometimes limited.
The discussion started with a review of oil and gas supply and demand. But the quality of data is crucial and there is a risk that the data quality will continue to deteriorate in the future.
For many participants, the oil market is working well. However it needs to be transparent and fair.
Link between product markets and oil.

Information is crucial. Traders must spend 5/10% of their time getting information. What you get is not what you want and this is not what you need. Is price a fair reflection of the market? A fair price depends on a fair market. Yes, but what is a fair market? The role of PRAs (Price Reporting Agencies) is very important.

Session 2: the impact of energy demand in China

In 2014, oil demand in non-OECD countries will exceed demand in OECD countries. Global oil demand will grow by 1.1 Mbd year-on-year, up to 96.7 Mbd in 2018 from 89.8 Mbd in 2012. Chinese oil demand will reach 12 Mbd in 2018 (10 Mbd in 2013) and will represent 13% of total world demand. The increasing share of non-OECD oil demand is also the result of the filling of emergency oil stocks in China and – to a lesser extent – India. The constitution of Strategic Petroleum Reserves - Phase 2 – was achieved in 2012, with 89 Mb. Total Phase 2 capacity, now estimated at 245 Mb, should be complete by 2015. Phase 3 – 152 Mbd – should be complete by 2020.

Crude oil distillation capacities will decrease in the OECD area, while additional capacity will come from China (45%), the Middle East (22%) and other Asian countries (14%). Some additional capacity will come from Latin America.

The demand for natural gas will increase everywhere except Europe. A significant proportion of this increase will come from China. China is adding the amount of current German imports to its imports requirements. Burma imports are still limited upstream. Russian imports are unlikely before 2020. Central Asia: expanding infrastructures but high prices? China will absorb the whole production increase in Central Asia and one third of the global increase in LNG supply.

Most of the increase in LNG imports up to 2018 will come from Japan, China and other Asian countries (about 25% each, the rest from other countries).

Gas demand for transport use will develop rapidly and could reach 100 Bcm (equivalent to around 2 Mbd or between 5 and 10% of total transport demand). Most of the demand will be for Asia, with China representing more than 50% of Asian demand.

The development of non-conventional gas in China cannot keep up with demand. The geology is complex, the population is dense and water is scarce in Tarim/Ordos. Regulatory issues have not been resolved. China will add the equivalent of almost the whole gas output of the Netherlands, but with only 100 shale wells so far. The shale gas ramp-up will occur after 2020.

Incremental gas plus coal consumption is about the same in China and in the rest of the world. But

the demand for coal will increase by 450 Mt (in 5 years) in China – 200 Mtoe in RoW - and the demand for gas by only 100 Mtoe – 400 Mtoe in RoW.

Of course, relations between China and the Middle East are developing, which play a key role in the oil supply of China. But China is not very keen about developing diplomatic relations with the Middle East. A major issue is the dispute regarding offshore territories that may contain oil and gas reserves.

The situation in Mexico is discussed. The debate on opening up oil and gas production to foreign companies could allow production in shallow waters to start much more quickly.

Session 3: Current issues – Environment – Preparation of COP 22 (Paris 2015)

The pollution situation in China is very serious. The Chinese 12th 5-year plan implements CAFÉ standards, regulation regarding power generation. The target is urban pollution, not CO_2 emissions. Measures are taken by region. The role of coal will be reduced through more efficient use.
There is a state commitment to the development of renewable energies. The development of shale gas is also a priority.
In Europe, the issue is the cost of energy – especially electricity – production. The cost of subsidies for renewable energies is also a key issue. In the UK, the decision to develop nuclear energy appears to be logical in term of costs.
The risk for future conferences is to "remake Copenhagen". There is a need for greater understanding of the issues by the major countries.
In the Middle East, energy efficiency is an absolute priority.

A summary of what is happening in France is presented. The environmental conference of September 14-15, 2012 included a Round Table for Energy (with all stakeholders). It delivered a Roadmap for Ecological Transition (October 2012) and decided that a National Debate should be launched soon afterwards: January-July 2013.
The objectives of the National Debate on Energy Transition (DNTE) were to make energy a day-to-day concern for all citizens (heating, moving, lighting, eating, and manufacturing) in order to tackle the rising energy bills of many households. For the government, climate change is a major concern, even if French GHG emissions are relatively low compared to other OECD countries

- The fossil fuels bill is equivalent to the French trade deficit
- France has to meet several EU/national quantitative targets (3 x 20% policy, -75% by 2050, etc.) as well as new national objectives for the energy mix set by President Hollande (50% nuclear in power generation by 2025 horizon, etc.).

- General Objectives
  - To mobilize French society as a whole
  - To create the foundations for the introduction of a national strategy for energy transition
  - To help the French Government produce a draft Steering Law for Energy Transition (LPTE) to be submitted to the French Parliament
- Website www.transition-energetique.gouv.fr

- Four questions to kick-off the Debate:

- How to encourage energy efficiency and sobriety? Consideration of ways to change behavior, production, consumption, transport and necessary energy services
- Which pathway to achieve the appropriate energy mix by 2025? What are the possible scenarios up to 2030 and 2050 compatible with French commitments to tackle climate change?
- Which are the choices with respect to renewable energy and new energy technologies? Which strategy for industrial and local development?
- What costs, what benefits and how to finance the energy transition?

Eight working groups have been set up (1. Energy Efficiency – 2. Energy Scenarios – 3. Renewable energies, new energy technologies – 4. Financing – 5. Governance – 6. Employment – 7. Competitiveness – 8. Distribution).

Reducing CO_2 emissions leads to a social cost of the energy transition. The issue of energy poverty should be tackled.

An agreement, initially between China and the US, then within G20 countries, would solve most of the problem (75 of emissions).

Energy policies have three objectives: security of supply, competitiveness and reduction of CO_2 emissions. There is no convergence between these three objectives. The three objectives should be discussed in a very transparent way, something that is very complex.

Economic growth relies on energy consumption. The issues must also be discussed with private consumers as well as industry.