Didier HOUSSIN, IEA

I'd like to make three points:

1) The IEA foresees a bright future for Natural gas markets by 2035

2) Yet the gas industry will have to face many uncertainties over the short and medium terms

3) We still think that energy security will remain an important issue in most parts of the world

1) One of the key messages of the WEO 2010 is the forecast of a bright future for Natural gas market over the long term

Natural gas is the only fossil fuel for which demand is higher in 2035 than in 2008 in all our scenarios, though it grows at different rates.

In the New policy Scenario which is our new central scenario, demand reaches 4.5 trillion cubic meters in 2035, an increase of 44% over 2008, representing an average rate of increase of 1.4 % per year. Demand grows more quickly, at 1.6 % per year, in the Current policy Scenario. In the 450 scenario, demand rises by a more modest 0.5 ù, peaking in the late 2020s.

In the New policy Scenario, non-OEACD countries account for 84% of the increase in demand between 2008 and 2030. China's demand grows fastest, at almost 6%per year, accounting of almost a quarter of the rise in global demand to 2035. Demand in the Middle East increases almost as much. In all scenarios, non-OECD countries consume around 1 tcm more than OECD by 2035.

The power generation sector is the key driver of future gas demand : while we would have strong growth in the CPS and NPS, the growth would be much more limited in the 450 scenario due to competition from renewables, nuclear and Coal + CCS.

We have heard many suggestions that **gas demand may be higher than in our current scenarios**, considering the skyrocketing demand growth in China and India, and increasing supply in terms of UG or LNG supplies. At the same time it is more and more widely recognized that a **massive fuel switching from coal to gas could be a very effective way to swiftly abate CO2 emissions** of the power sector.

For these reasons, we are going to come up with a **high gas growth scenario** next year, probably in **May 2011 which will focus on the strong growth potential of gas demand** in anticipation to the WEO 2011**.** We will also analyse the implications of such a scenario for climate change policies.

2) Looking to the short and medium terms, we still see many uncertainties linked to future gas demand growth, the outlook for unconventional gas and the evolution of pricing mechanisms.

1. **Despite the recent recovery, the pace of economic growth is still very uncertain.**

Economic growth has a direct impact on the industrial sector needs but also on electricity demand.

Regarding **the use of gas in power generation**, it is important to note that **gas is often at the margin in the merit order**. Gas use depends on nuclear performance, renewable output, and the relative coal to gas prices.

But it is important to bear in mind that gas has been the fuel of choice in the OECD region as well as in many non OECD countries, and when we look forward, this will still be the case.

Despite rising prices, combined-cycle gas turbines remain the utilities' preferred option for new power stations in many parts of the world.

In the US, where quite a lot of coal-fired plants are older than 40 years and which is awash with gas, there is **a real opportunity** to decommission old coal fired plants and use more under-utilised gas-fired plants. That would result in significant benefits in terms of CO_2 emissions.

The **relative coal to gas prices** can have a huge influence on gas demand. In the US in 2009, the output from coal fired plants declined more than electricity demand, because gas was able to push coal out of the power mix, due to the relative lower gas prices in the US. Conversely, recent data seem to show that European gas demand growth weakened during summer due to higher NBP prices, which affected the competitiveness of gas-fired plants. The level of coal prices will have a determining impact on future gas demand in particular as delivered coal prices reach around $120 in China.

CO_2 prices will also play a key role in this gas versus coal competition: CO_2 prices will generally help gas against coal-fired plants, but renewables and nuclear power are favoured even more. For this reason, gas is often the lowest-cost generating option at CO_2 prices that are neither very low nor very high: low carbon prices typically favour coal, while high prices favour renewables and nuclear power.

Finally, **emerging markets could grow even faster than we forecasted**. In particular, the Chinese is growing fast and will exceed **100 bcm this year** which is higher than Germany or the UK. Demand grows in all sectors, residential, transport, industry and power and China's demand has been increasing **by 20% this year** so far. The consensus among Chinese companies is now that Chinese demand could reach 300 bcm by 2020.

2. On the supply side, will the Unconventional gas revolution continue in Northern America and expand to other parts of the world?

Without any doubt, unconventional gas has been a game changer in the gas market. The recent boom in shale gas in the US is quite recent but has indeed a huge impact on the markets. It is increasing fast and it happened just when demand and prices were dropping. Breakeven costs are also lower than what was previously reckoned ($4-5/MBtu, sometimes lower, versus $6-8/MBtu before 2008).

Now the question is **whether the shale gas boom will continue in the US** (2) and **whether it will expand at the same pace in other parts of the world**.

Australia has seen its first CBM to LNG project being sanctioned (BG's Queensland Curtis), and others are going to follow. **China** is more and more bullish about shale gas and CBM and is now regularly speaking about up to 30 bcm of shale gas production by 2020. For **Europe**, it will require at least a decade, and there are many obstacles to overcome.

WEO 2010 expects combined UG production to rise from **12% of current production in 2008 (around 380 bcm) to 19% by 2035 (860 bcm).** One quarter of the increase comes from Northern America, then Australia, China and India. But we have very little visibility for other regions and it would be premature to claim unconventional gas will be developed everywhere at the same pace as in Northern America.

3. **As I mentioned earlier, gas prices are a very important factor. One key question is how gas pricing mechanisms will evolve.**

Gas markets are globalizing, although North America seems likely to be relatively isolated for the moment. LNG is the link between the regions and LNG trade will grow as new production comes on line and new markets emerge.

Against this backdrop, we have seen quite interesting price developments in the three main markets – North America, Europe and Asia.

- We saw a **decoupling between oil-linked gas prices and spot prices in 2009 with gas prices now at 1/3 of oil prices in the US (ratio 1/2)**
- Europe **has benefitted more and more from the impact of low spot prices**
- But since April 2010, there has been **a divergence between UK and US spot prices**, with HH staying low around $4 and NBP going up to $7-8/MBtu.

In our view, **prices reflecting market principles are better suited to ensure the competitiveness of natural gas**, in particular for the power sector. While long-term contracts are essential to ensure long-term investments along the gas chain will be forthcoming, long-term contracts pricing should evolve in the future to better reflect fuel competition in the power sector.

Looking forward, whether we see additional spot linkage or not will depend on the global supply/demand balance, the levels of HH prices and the evolution of oil prices.

3) My last remark is that Gas security will remain an important issue in most parts of the world

It is not to be ruled out that **demand recovers much faster than expected** in the coming years. As mentioned earlier, there is a lot of upside potential in China, and gas could effectively take a larger share in new generation of electricity.

Investment will be needed to meet this growing gas demand in particular in emerging countries along the gas value chain: in the **upstream** to replace declining production from existing fields, in **transport** between regions, on the **downstream** market in storage and interconnections. Producers will have also to take into account the increasing domestic demand, and therefore carefully assess their export potential versus their country needs.

Accessibility to resources is also important, and enhanced cooperation between IOCs and NOCs will be a key tool to foster investment especially as gas resources come from deeper water, Arctic sources, or more complex fields like sour gas.

IEA ministers confirm in their last ministerial meeting in October 2009 that **well functioning and competitive markets** are the best way to ensure long term gas security. **Energy efficiency, diversification of gas supplies and increasing international cooperation,** as pointed out in today's dialogue, will also be essential to **foster the role of natural gas** in the energy mix.

Greater data transparency will be essential to meet that objective and we must bear in mind that nowadays gas data is very patchy compared to oil. The IEA has always been promoting transparency on gas data. For instance we have recently put together **an interactive map for Europe** with monthly data on cross border points.

We also hope that **JODI will be rapidly extended to gas**, which would greatly enhance the transparency on global markets and benefit all market players.