WGC Keynote Mr Frank Chapman (Chief Executive BG Group)

Gas in the energy-mix: how to maximise gas growth

Context setting:

Good morning, ladies and gentlemen. At this time of high prices and healthy profits, outsiders might expect those of us in the natural gas industry to be sitting with our feet up, just enjoying the sound of the cash-register ringing.

In fact, it's hard to remember a time when we had to work harder in the industry. On the one hand, there is all of that opportunity to get after. Even before this period of sustained high prices, ours was an industry with a full slate of projects in preparation. Higher prices unlock a whole range of new opportunities.

On the other hand, there are fresh challenges to deal with: the risk of demand destruction; rising service and commodity costs; and heightened political concerns around supply security.

What I'd like to do today is take a look at the way our industry is developing and consider how best we can seize the opportunity and deal with the challenges. And, to cut to the chase, I'm going to argue that it's only through partnership, only by the industry developing an active, shared strategy designed to maximise gas-growth that we'll see the gas industry realize its full potential.

The challenges to natural gas

Let's begin by looking at the challenges - and I think they break down into two specific areas: the impact of high prices and heightened geopolitical risk. So, what's driving these effects?

On price, one major factor has been the resilience of the global economy. It's repeatedly defied forecasts of recession with demand holding up, despite higher prices. As we know, developing countries like Brazil, China and India have played strongly into that phenomenon.

The continuing link between oil and gas prices is another factor. For over a year now, conventional analysis of oil supply and demand and the availability of stocks have failed to explain the level of oil-prices.

The uncertainty felt in oil markets is also felt in gas markets – particularly where it is transmitted through gas-price indexation to oil.

Significantly increased demand for sector goods and services means tougher competition for contractors and people and a higher cost-structure – in some disciplines, like drilling, dramatically so.

Geopolitical factors over the past couple of years have both stoked prices and undermined faith in oil. Whether it's chronic instability in post-war Iraq, the threat of sanctions – or worse – against Iran, fears of supply interruptions in Saudi Arabia, US-Venezuela tensions or severe oil supply disruption in the Niger Delta, the oil-price has become more than ever a barometer of international tension.

Even before the Russia-Ukraine supply interruptions early this year, nervousness around oil supply security had already begun to tip over into concern about gas imports – particularly in the US and Europe where gas import reliance is rising. This is the case despite the fact that the gas industry today is more flexible, resourceful and global than ever.

But there are those that wouldn't agree. The critics, sceptics and sponsors of competing fuels are always on the look-out for events such as those in Bolivia and the Ukraine to argue the unreliability of natural gas. It means that, though natural gas is abundant and offers economic and environmental attractions, it won't get an easy ride in the security of supply debate.

At best, consumer countries want greater diversity in their gas supply portfolios. Alternatively, they're looking to nuclear, renewable and clean coal alternatives. Even not-so-clean coal is in a stronger position today. And there are already signs of some potential gas demand destruction.

The US Energy Information Administration has scaled down forecasts of gas growth from an annual average of 3.2% out to 2020 just four years ago to 2.3% out to 2025. In the world's largest gas market, the US, natural gas demand levels have been more or less flat since 1999 with consumption down 1.6% in 2005 compared to 2004. There's a similar drop in the forecast for 2006.

Gas demand in 2005 in the UK, Europe's largest gas market, was 2.3% lower than in the previous year. Gas-use for power generation was down 5.7%. And a recent report from the Oxford Institute of Energy Studies' showed that high gas-prices could cut potential EU demand by as much as 60bcm per year in a market of potentially 600bcm by 2015. That would represent a significant slab of natural gas demand destruction.

And there's a technology challenge here too. We hear a great deal about research into zero carbon coal-fired power plants. Are we as an industry doing enough to ensure there are low or no-carbon gas-fired plant? Or are we at risk of coal leap-frogging gas and becoming effectively the cleanest fossil fuel?

Natural gas – the opportunities

I make these points not to make you reach for the cyanide pills. But it *is* important that we acknowledge the scale of the challenges that we, in the gas industry, face.

But we can hardly complain at the scale of the opportunity that the current context presents - because high prices are not only supporting major investment in LNG; they're also assisting the return of big pipe gas projects.

LNG trade rose by 8% in 2005 and now accounts for 21% of total gas trade. Major transnational pipelines, such as the North European Gas Pipeline, Alaska and Nabucco proposals, have all emerged or moved closer to development in the last 12 months. These are long term investments that require confidence in the long term position of gas in the fuel-mix.

Even at the revised level of 2.3% CAGR, the EIA forecasts represent healthy incremental growth – higher than that for competing fuels. And the situation is actually much brighter. The factor that is driving growth in Atlantic Basin trade is the need for huge volumes of replacement gas to meet declining indigenous supply in some of the main Western consumer countries.

And our calculation is that the combination of replacing existing supply and meeting incremental demand growth will require over 100bcf/d of new production by 2015 – equivalent to around 40% of current global demand. That is a huge figure and it represents an outstanding set of opportunities for international gas companies with strong execution skills, advantaged market access and robust supply portfolios. And we expect around two-thirds of that total to be internationally traded gas.

So – challenges, yes, but a scale of opportunity that most businesses outside the energy sector would die for.

How, then, do we mitigate the downside and maximise the advantage we can derive from the current attractive investment climate?

I mentioned a moment ago the need for an active, industry-wide strategy aimed at maximizing gas-growth. For me, it's a strategy with three components:

- One – a clear understanding of the new ‘order’ that defines the roles of the various players in the global gas industry;
- Two – the need for NOCs and international gas companies to develop a detailed appreciation of the evolution and workings of today’s global gas markets; and
- Three – a concerted plan to counter criticisms and re-affirm natural gas as a reliable and secure source of energy supply; and to ‘sell’ proactively the benefits of the fuel.

The gas industry’s ‘new order’

Let’s then, go through these three points and look first at the industry’s ‘new order’.

Traditionally, supermajors and majors brought to the party: finance; technology; skills in geoscience; and what you might call ‘the pioneering mentality’. Now producer countries are often flush with cash. They can buy technology off the shelf. Their own NOCs, or service companies, can provide the geoscience expertise and the pioneering spirit – if that’s what’s needed. Producer countries may not have at hand everything they might get from an international contractor, but a good many of them now have ways of accessing the essentials.

So what are we in the private sector doing to carve out some new space of our own? These days our focus has to be on building strong relationships with resource holders and consumer countries. We need to demonstrate to the former that we can offer them the specialist skills and insights at *any point* along the gas-chain that will add value to their resources.

At the other end of the chain, we need to show consumer countries that we can be reliable suppliers – ideally from a diverse, and therefore secure, portfolio. We are the broker as well, linking producer and consumer countries to mutual benefit and managing some of the intermediary risk and the contrasting needs that can exist.

It's true that, in recent years, the producer countries' hand has been strengthened because of high demand for hydrocarbons. Some industry watchers and senior figures within the industry have begun to describe this shift in the balance of power pejoratively as "resource nationalism". I think that's a superficial analysis.

Much of what we have seen in recent years has been an entirely understandable evolution of the industry. It's understandable that producer countries should seek to maximise the value of their resource; it's absolutely logical *and right* that NOCs should develop their expertise and extend their ambitions.

But supplier power may be temporary and it may be illusory. After all, consumer countries have power as well. They *can* choose *alternatives* to gas.

As for the role of the private sector, <u>*we*</u> have to recognise the need to work hard to demonstrate the value that our partnership can bring to the resource holder. And it's our ability to complement resource holders and NOCs with our skills, insights and market access that gives us strength in the power-mix.

In fact, producer countries that adopt go it alone positions, too dominated by the views of supply supremacy, risk missing the opportunity to create new value as international gas markets evolve and change.

Today's global gas markets

For me, though, it's the second component of a gas-growth maximisation strategy that is the most challenging. It's also the most fascinating. And that is an appreciation of the way gas markets themselves have evolved and continue to evolve. The company that can understand how those markets are working and where the future opportunities might lie is the company that can seize the competitive advantage.

In our own case, I can't help but think that the ability to focus entirely on gas has amounted to a major, strategic benefit. It allows us to focus sharply on how markets are evolving and how we can create opportunities which align with our corporate strategy. And first mover advantage in Atlantic Basin LNG is perhaps the best example of where we as a company gained an edge and have been able to retain - and build progressively on - that advantage.

Let me offer two perspectives on the current stage of evolution of global gas markets. First: in trying to locate value, I am convinced that, nowadays, there is no single place in the gas-chain where value can be guaranteed to exist or be sustained indefinitely. Second, gas companies need to organise themselves to respond to changing and much more flexible market structures. These include changing relationships on both the supply and demand side.

On the first point, each value-chain is different and that means that the successful company needs to develop real expertise in identifying where the opportunity lies in any specific play and how this will evolve and shift in time.

In our case, whether it's preparing with our partners a major development programme for one of the world's largest gas condensate field in Kazakhstan, or reversing decline in our North Sea portfolio through a strategy of play extensions and production hubs, or working towards integrated plays in Algeria and Nigeria, expanding a T&D business in Brazil and India, or using our LNG supply and market portfolio to create new value from increasing global inter-connectedness, the skill sets are multiple and varied.

On the second point, in the Atlantic Basin, the business model has been shifting for some time from point-to-point to a more flexible system. This is as a result of the large and fungible US and, to some degree, the UK markets becoming more LNG import dependent.

There are signs also that a similar shift may be starting in Asia-Pacific as well. Gas companies need to structure themselves to take into account these shifts in trading patterns and the flexibilities this will require.

And global LNG markets over the past nine months best demonstrate this point. Prices at a premium to Henry Hub have been available in markets in Europe and the Far East. In the period since the third quarter 2005, we marketed around 50% of our LNG (originally contracted for the US) to markets elsewhere around the world.

A plan to 'sell' the benefits of natural gas

The third part of a gas-growth maximisation strategy is an area where all of the players in the natural gas industry need to play a part. And that's around a concerted plan to 'sell' the benefits of natural gas.

It *isn't* true that, because there have been disruptions to oil supply, natural gas becomes automatically less reliable. It *isn't* true that supplier countries are unreliable - in fact the track record of international suppliers is exemplary and with the added supply diversity of today's international gas market, gas supply is more reliable than ever. It *also isn't* true that there is a conspiracy to deprive the developed markets of much needed energy – in fact there is a thriving competitive international market place

Successful long-term trade needs suppliers and customers on both sides of the transaction to be satisfied. The notion that all power might lie indefinitely on one side or the other is – in my view – fundamentally flawed and it would be equally flawed to allow such notions and the fear they engender to diminish the reputation of gas as a secure and reliable energy source for today and tomorrow.

But, I can’t help thinking that, as an industry, we don’t always challenge these criticisms vigorously enough. We don’t always help ourselves. We don’t argue the strong case for gas with sufficient clarity and conviction. And there’s an obvious case to be made around some clear themes:

- Natural gas is abundant with a reserves to production ratio of more than 65 years of current global demand with probably as much again available in unproven and yet-to-find reserves;
- Natural gas is the cleanest hydrocarbon with carbon emissions 40% lower on combustion than coal and 22% less than oil; and, as such, it can act as a bridge to a low or no carbon future;
- Disruption to international gas trading has been negligible over a supply history lasting more than 40 years
- Natural gas is delivered by pipeline and by ship using technologies that are established and reliable; this is not a fuel that needs a technological or economic breakthrough to make it a viable option.

But there’s a psychological aspect to this too. Consumer countries are looking to nuclear and clean coal and renewable alternatives because they see them as technologies that are effectively ‘home grown’ and, therefore, more secure. It’s only if producer countries, NOCs and independent oil and gas companies work together to challenge the misconceptions about the capacity of natural gas to meet energy supply need that we can reverse the growing perception of gas as somehow ‘risky’.

And in this respect, we need to underline again and again the fact that diversity of gas supply source is a powerful strategy for securing energy supply, without resorting to more expensive or less environmentally friendly or unproven technologies.

Looking at the overall picture, perhaps we've enjoyed too many years of optimistic forecasts about the prospects for gas. Perhaps as an industry we've become too blasé. And I believe the industry needs to get off the back foot and make the case more forcefully.

Let me conclude by summarising the issues key to shaping perception of our industry and to maximising gas-growth in the short, medium and long term.

Conclusions

- One: consumer countries increasingly see natural gas imports as a part of the problem around energy supply security rather than a major part of the solution. That's an inaccurate perception and it's one we need to counter proactively
- Two: there is a new global gas industry dynamic that puts the producer countries in the driving seat – but there is good reason to suppose that might be a temporary and illusory advantage unless producers, NOCs and international gas companies work together to re-establish our fuel's reputation as a reliable source of energy supply

- Three: operationally, the focus has to be on good partnerships, insight into the evolution of global gas markets and outstanding levels of execution
- Four: strategic alignment between stakeholders, innovative thinking, agility and flexibility will be critical.

Most of us here today wouldn't dream of working in any other industry than our own. It's full of opportunity and at the same time constantly challenging. But the challenge I outline today is a challenge like no other. It's about the very future of our industry and extending the life-span of natural gas right out to the middle of this century and beyond.

Looking out into the audience today, I see plenty of competitors out there but I see partners too. And partnership is going to be the key to taking on this challenge. If we are to maximise gas-growth, we have to pull together and argue the case for gas.

Ladies and gentlemen, thank you.