Supply and Demand – Shaping the future industry

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Jeroen van der Veer is Chief Executive of Royal Dutch Shell plc. He joined Shell in 1971 and worked in manufacturing and marketing in the Netherlands, Curaçao and the United Kingdom. In 1992, he became a Managing Director of Shell Nederland. Three years later he became President and Chief Executive of the Shell Chemical Company in the United States. He was appointed a Group Managing Director in 1997.

Jeroen was born in the Netherlands, and is married with three daughters. He has two degrees – one in mechanical engineering from Delft University and another in economics from Rotterdam University.

He is a Non-executive Director of Unilever.

This text forms the basis of a speech delivered by Jeroen van der Veer at the Energy Institute's International Petroleum Week in London on February 16th, 2008. It may differ from the spoken word.

In this speech, Jeroen argues that the oil and gas industry should continue to invest in new energy supplies and CO_2 solutions "through the cycle". Governments can foster a better investment climate by having fair and predictable tax regimes, adopting cap-and-trade mechanisms, and by providing support for CO_2 Capture and Storage and innovative renewable energy projects. Shell will continue to invest "through the cycle" in conventional and unconventional oil and gas projects, and remains committed to building at least one big renewables business. Oil sands continue to be an important part of our portfolio, are not off the scale environmentally, and we believe we can produce them responsibly.

Introduction

I've been asked to discuss supply and demand issues. I'm happy to do that. But don't expect me to make any predictions about the oil price.

All I know for certain is what I said in Davos: nobody knows how long the downturn will last. And no bell will ring at the lowest point. And, so, for Shell, it's all hands on deck and overtime on the bridge. And be prepared for everything.

We are very cost-conscious. And we constantly review our planning in connection with financial risk. In tough times, with tough choices, a conservative balance sheet is key.

The toughest choice our industry faces right now is whether to continue investing in future supplies of oil and gas, despite the downturn.

Or, as Hamlet would say, "to invest or not to invest, that is the question."

At Shell, we intend to invest through the cycle and reap the benefits when the economy recovers and the demand for oil and gas picks up again.

We will not repeat the start-stop investment policy of the past.

Last year, we made the biggest investment in projects of any private company. And, although we have slowed down some investments and delayed decisions on projects, we still expect to invest in the range of $31-32 billion in 2009.

And, as a further sign of confidence in the future, we increased our dividend per share by 11% in 2008 and have announced a further 5% for the first quarter of this year.

Technology position

Shell also has the biggest R&D programme of all International Oil Companies. We invested $1.2 billion in research and development in 2007.

Having a strong, long-term technology position is vital. It helps protect our company from short-term cyclical fluctuations and opens different pathways to the future.

A good example of a long R&D play is Shell's gasification technology. During the 1973 oil crisis, Shell scientists began to research converting coal into liquids – through a process of gasification and synthesis.

To cut a long story short: by 1993 this R&D effort had led to the construction of a gas (not coal) to liquids plant in Malaysia, while we're currently building a much bigger one in Qatar: Pearl GTL.

And in the past five years, we have also witnessed Shell's commercial breakthrough of coal gasification technology, with 26 licenses sold globally.

Coal gasification fits together well with CCS. Shell's gasification process can create a stream of concentrated, high pressure CO_2 that is easier to capture, *pre*-combustion, than the standard, low-pressure, *post*-combustion CO_2 stream that is diluted in the flue gas of a power plant.

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Hard Truths

Back to energy demand: although it's difficult to know when exactly, the demand for energy will pick up again.

For the first half of this century, the

three hard truths of rising energy demand, lagging supplies and higher CO_2 emissions are as valid as ever.

Since the world population is growing and wealth is increasing, we don't expect a "demand surprise". Also, oil and gas will continue to be the world's main "energy providers", because it will take decades before other energy forms rank better on the three As of Affordability, Acceptability and Availability.

Rather than a demand surprise, we could see a supply surprise – an unpleasant surprise.

The supply challenge is made more urgent by the rapid decline rates of existing fields. For every three new barrels that we find and bring on stream, two are needed to offset field declines. And each new barrel requires more money and brainpower to produce than the barrel it replaces.

So, to avoid a severe supply crunch, the industry should continue to invest.

Impact of the economic crisis

During a recession, that's easier said than done.

The oil price has not reached historic lows. But while the oil price is back where it was in 2004, costs are still double what they were back then.

What we're looking for is a happy medium between the two extremes of a very low oil price environment and a very high price environment that causes the sector to overheat.

If prices stay at the current level and costs continue to come down, I believe the larger players in our industry will manage.

But if prices came down further, and would stay there for a long time, it would become very difficult to continue doing what is necessary in anticipation of the three hard truths.

We would see more project delays, in oil and gas projects, as well as in renewables projects.

Renewables projects suffer from the disadvantage that they generally have high capital costs, high operational costs and slow payback time.

The London Array wind farm project illustrates this. I realise a lot of people here in the UK were disappointed by our decision not to proceed with the London Array wind farm. We were disappointed too that the project did not pass our economic hurdles. But renewable projects, like hydrocarbons projects, need to be economic, or we won't have the resources to deliver energy for the long term.

A prolonged recession would also make it more difficult to build CO_2 Capture and Storage, or CCS, demonstration projects.

CCS is a vital technology to cut greenhouse gas emissions from power plants and large industrial installations. According to the UN Intergovernmental Panel on Climate Change (IPCC), CCS may contribute up to 55% of the emission reductions that scientists believe are necessary during this century to address global warming.

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What to do about it

I think government efforts could make a real difference in two areas:

- Taxes
- CO_2 policies

First, on taxes. Taxes are much easier to control for governments than the oil price or capital costs. So they are a very important instrument for governments to mitigate the up-and-down oil price and the volatility of the energy sector.

We need tax and royalty systems that are stable and predictable, and so maximise production and recovery of oil and gas resources. And we need to remember that what is paid in tax is not available for investment in future supplies.

Cap and trade

A second factor is the price of CO_2. A hard CO_2 price is the fastest route to greenhouse gas emissions reductions. A hard CO_2 price would boost CCS and help make renewables projects more competitive.

Shell favours cap-and-trade systems as the best way to determine the price of CO_2. That's because in cap-and-trade,

the emphasis lies on the cap. The cap must be met. So you have a certifiable environmental outcome. The trade provides the commercial incentive for the lowest-cost reduction projects to be implemented.

Cap-and-trade schemes can also provide an alternative source of financing for CCS projects . . . at a time when governments are spending billions to bail out banks.

For example, the EU recently set aside 300 million tradable emission allowances, to be awarded to innovative renewable energy projects or CO_2 storage projects. Depending on the market price for a ton of CO_2, this could mean about €6-9 billion in assistance to get such new technologies up to scale. And I know the UK government played an important role in securing agreement for this.

If we could extend cap-and-trade beyond Europe to all of the OECD, as the European Commission has proposed, more capital would become available and greater emissions cuts could be achieved. And, most importantly, the larger market would mean that the overall cost of meeting the reduction targets will fall.

Shell's contribution

As for Shell's contribution to meeting the UK and global energy challenge, here are a few things I'd like to highlight, in addition to what I just said about our investments in projects and R&D.

First of all, to help supply the world's growing energy needs, Shell itself is investing in long-life projects that will help us to grow production by 2-3% per year in the next decade.

That's also why we're investing in further growing our leading Liquefied Natural Gas portfolio.

And we're building the Pearl Gas-to-Liquids project in Qatar, the largest single equity investment in a single project by a UK plc ever. Already, over $1 billion of orders of goods and services for this project have been placed in the United Kingdom.

Here in the UK, our retail stations serve half a million customers each day.

As regards energy security for the UK, Shell is continuing to invest hundreds of millions in the North Sea. Last year, Shell UK brought four new North Sea fields on stream. And the St Fergus and Mossmorran upgrades will rejuvenate and extend the life of two onshore plants to 2021, safeguarding 300 jobs and providing additional employment for 150 contractor personnel.

Even in times such as these, when spending is under review, no compromise will be made on safety or work that is required to ensure integrity.

We will continue to look for talent in British universities, and to support research and education in the UK in various ways.

On the renewables side, Shell blends in more biofuels worldwide than any other company. And we lead the development of a commercially viable next generation portfolio of fuels. In this context I'd like to mention the important role played by Shell's Research lab in Thornton.

We're one of the world's top 20 wind companies, and active in thin-film solar technology and hydrogen.

As regards the oil sands in Canada, they continue to be good projects. We will need those supplies in the longer term and we believe Shell is well positioned to develop these important resources.

The environmental impacts of oil sands are not off the scale. Their total greenhouse gas footprint – at 24 Megatonnes in 2007 – equals about 1.5% of emissions from the EU's power sector.

The mineable area is only 0.1% of the Canadian boreal forest. And the mined areas can be rehabilitated more quickly than areas destroyed by a forest fire. Reclamation of mined areas can start 15 years after first disturbance, taking about 40 years to be certified as a full self-sustaining ecosystem. The return period from a forest fire is about 80 years.

It's not that we're saying the environmental challenges associated to

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oil sands are too small to worry about. They have to be mitigated. But they should be seen in the right context.

Conclusion

Let's summarise:

The economic crisis makes continued investments in future energy supplies more difficult, but at current prices, not impossible.

Shell continues to have confidence in the future and believes the three hard truths remain valid.

Governments could play a role in reducing the volatility of our sector through sound taxation policies and international alignment on CO_2 pricing through cap-and trade.

And, consistent with the world's needs, hydrocarbons will remain at the core of Shell's business. We believe we have the skills to produce them responsibly and to reduce their CO_2 impact. We also want to build at least one big renewables business. We have a few to choose from, but sustainable biofuels is clearly a big opportunity for us and complementary to our existing strengths in transport fuels.

Thank you.

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