



Who needs international oil companies?



Malcolm Brinded
Executive Director Exploration & Production
Royal Dutch Shell plc

Offshore Europe Oil and Gas Conference, Aberdeen
4th September 2007



Malcolm Brinded is Executive Director of Exploration & Production and a member of the Board of Royal Dutch Shell plc.

He was born in the UK in 1953 and joined Shell after graduating in Engineering from Cambridge University. He has worked for Shell companies in Brunei, the Netherlands, Oman and the UK. In 1998 he became Managing Director of Shell UK Exploration and Production – responsible for a fifth of the country’s offshore oil and gas business – and from 1999 until 2002 he was Shell Country Chairman in the United Kingdom. Since 2002 he has been a Board member of parent companies of the Shell Group.

He is a Fellow of the Institutions of Civil and Mechanical Engineers and a Council member of the Royal Academy of Engineering. He was appointed CBE in 2002 for services to the UK oil and gas industry.

He is a member of the Russian Foreign Investment Advisory Council and of the Nigerian President’s Honorary International Investor Council, and a Trustee of The Prince of Wales International Business Leaders Forum.

Do international oil companies still have a role in a changing industry confronting new challenges – with growing dependence on more difficult resources and the pressing need to reduce carbon dioxide emissions? Increasingly capable national companies continue to want partnership with international companies, who add value through advanced technology, integration and global scale. International companies are still needed to help maximise recovery in mature basins, although not necessarily in every field. They have a vital role in developing new supplies for global energy consumers, and in responding to climate change. This includes commercialising the technology to capture and store carbon dioxide from fossil fuels, which is a priority. Responsiveness to a changing world is a key characteristic of international majors, and will be even more important in the future.

This industry has met many challenges in its history not least here in the North Sea. But delivering the energy the world needs will present even greater challenges over the next few decades. These can be summed up in three hard truths:

- global demand for energy is accelerating,
- ‘easy oil’ can’t be relied on to meet this growth, and
- increasing coal use will make cutting carbon dioxide emissions even more difficult.

By ‘easy oil’, I mean conventional hydrocarbons that are relatively straightforward to produce. In contrast, meeting rising demand will increasingly depend on more difficult resources – in harsher conditions, unconventional, contaminated, or requiring complex enhanced recovery techniques.

Our industry is also changing – with new players, relationships and dynamics. So what role is there for international oil companies, particularly the integrated majors? Who needs us?

Let me give three short answers, which I’ll then expand.

First, do major resource holders need international companies? I think we’re increasingly not so much needed as wanted. Second, are we needed in mature basins, such as in Europe? I say yes, although not always. Third, are we still needed by our customers, global energy consumers? Not surprisingly, I say yes, and probably more than ever.

Wanted capabilities

On the first of these points, major resource holders clearly play an increasingly important role in energy supply. Their national oil companies have become highly knowledgeable and

capable. They don’t need international oil companies. It would be a big mistake for us to assume they do.

But national companies continue to want partnership with international companies. They do so because we have complementary capabilities – to help them tackle more difficult projects, maximise the value of their resources, and develop local people and businesses. For example, Shell is working in partnership with national companies in over 20 countries.

We see that the key is to add value in bringing technology, integration and global scale. So, in Shell, we have tripled our upstream technology R&D expenditure – particularly in subsurface tools, enhanced recovery and unconventionals.

We commercialise some advances – such as expandable tubulars and swellable elastomer well seals – to accelerate the learning from industry-wide application. But many others we apply only in our own ventures and partnerships, such as our proprietary seismic and subsurface modelling systems. Global scale operations help us to optimise these advances, and learn quickly how best to apply them.

More difficult resources require more complex solutions, and greater integration through the value chain and across the whole project.

Let me give two examples ...

First, Sakhalin II, the world’s largest integrated oil and gas export project, built in sub-Arctic frontier conditions, where we have recently installed the topsides on the third of the three offshore platforms. Commissioning of the LNG facilities will start soon, and the plant is on track to start exports next year.

Gas will go to traditional buyers in

“National companies continue to want partnership with international companies. They do so because we have complementary capabilities – to help them tackle more difficult projects, maximise the value of their resources, and develop local people and businesses.”

Japan and Korea, customers with whom Shell has built trusted relationships over many years. It will also cross the Pacific to North America, where our early investment in the first West Coast LNG regasification terminal capacity will enable us to import Sakhalin gas for customers in Mexico and the US from late next year.

My second example of global integration is our network of 24/7 Real Time Operating Centres established to support drilling operations around the world. A fourth hub was recently opened here in Aberdeen. These hubs – connected by satellites around the world to our key drilling rigs – mobilise the wide-ranging expertise unavailable in remote locations. They help to plan wells and monitor distant drilling operations around the clock – with real time data from the rig – spotting and solving problems quickly. So that experts in the Malaysian hub noticed erratic torque in a well they were monitoring in China, advised modifying the mud, and prevented a costly drill string failure.

The ability to transmit all sorts of live data directly to experts – wherever they are – allows us to leverage global experience more quickly and cost effectively than ever.

I mentioned the key role of international oil companies in helping to develop capabilities in host countries.

Building and transferring know-how has a high priority in Shell. This is not just because it is important for our partners. But because our business depends on the quality of our people everywhere.

Continuous learning in the workplace, supported by the latest distance learning techniques, is now hugely important. But cross-postings between operations remain vital for development and for leveraging talent globally. Just one example, today nearly 400 Shell staff from Malaysia are working in other Shell operations, including some of our most senior managers.

International companies must also help local businesses to develop. Let me give two examples of companies that have seized such opportunities to

achieve remarkable growth.

I'll start here in Aberdeen, where over 30 years Sir Ian Wood has transformed the Wood Group from a local fishing and ship repair company into a world-leading oil services business.

Ian will tell you that the company's relationship with Shell, starting with a contract on the Auk platform in 1976, has contributed to this success. Winning a major contract for the Brent field in 1979 was their first important offshore break. Today they work in 46 countries around the world.

In Oman, a small local construction company won its first contract from Petroleum Development Oman – worth just \$2,000 – in 1977. Galfar went on to become the first Omani company to win a PDO service contract and is now one of the largest engineering and construction companies in the region, employing more than 27,000 people.

I think that enabling local supply chains to flourish and grow to such international stature is truly a key contribution to 'sustainable development'.

So, I believe that international oil companies will continue to be wanted by major resource holders as long as we remain focused on understanding and meeting our partners' needs.

Contributing in maturity

My second main point is about mature basins, where maximising ultimate recovery is essential for meeting demand and ensuring supply security. This requires three things:

- advanced technologies,
- top class capabilities, and
- continued investment.

International oil companies have played a central role in developing areas like the North Sea. We're still needed, but not everywhere, doing everything. We need to focus our resources where our capabilities make the most difference and we can add most value.

Some fields really benefit from our subsurface know-how and from advanced technology right to the end. But not all. In some cases, other players are better placed to manage the final stages of field life – not least because

“The ability to transmit all sorts of live data directly to experts – wherever they are – allows us to leverage global experience more quickly and cost effectively than ever.”

“International oil companies have played a central role in developing areas like the North Sea. We're still needed, but not everywhere, doing everything.”

they are more ready to commit the people and capital needed.

Divesting mature fields that we've nurtured for decades is a tough decision. But our policy has always been to sell assets in which others see greater value. This is good for Shell, and good for the new owner, the industry and the country.

Let me stress that Shell is very definitely staying firmly in Aberdeen. Europe offshore remains central to our strategy, and we still see many opportunities for applying our technologies, capabilities and capital.

Expertise here in Aberdeen also plays an increasing role in supporting our global operations. For example, around 250 engineers in Aberdeen are now working on projects for Qatar, Russia, Nigeria and Gabon. This includes the massive Pearl Gas-to-Liquids project in Qatar, where they are helping to design the offshore facilities.

But we also continue to invest across our European portfolio, including in the recent Curlew C and Gjoa developments, and the major Valhall redevelopment.

And developing and applying advanced technology is crucial to be able to meet these new challenges.

Ormen Lange is pushing technological limits in many areas. For example, the wells – which Shell is currently drilling – are the largest ever deepwater gas wells. Just eight can meet 20% of the UK's gas demand.

At the other end of the scale, Shell's simple, standardised, unmanned, solar and wind-powered monotowers allow us to develop very small fields much more cheaply. We have already installed two in the southern North Sea, and plan to install four more this year.

Some developments depend on prolonging the life of existing infrastructure. So this year we committed to the £350 million rejuvenation of our onshore gas facilities here in Scotland, to extend their lives beyond 2020. The gas system is a vital UK economic asset.

This northern gas system already had one life extension in the 1990s, when we decided to implement the huge Brent depressurisation project. The then \$2 billion project extended the life of this

world-class field by more than a decade and increased recovery by 1.5 trillion cubic feet of gas, enough to meet Scotland's gas needs for eight years.

This is now being followed by another wave of investment, in Statfjord and Gjoa, both of which will deliver gas through our FLAGS system here.

Let me turn to safety, which must be our number one priority. And, as we have learned, mature fields bring particular challenges, including the need for immense focus on ensuring the integrity of safety critical equipment.

At its heart, safety depends on people:

- leaders demonstrating by their actions that safety is the fundamental value,
- supervisors ensuring that safety systems are functioning everywhere and always, and
- people strictly following safety rules because they recognise it as the first priority of their job.

In Shell, we work harder than ever to ensure those essential commitments are embedded in our culture.

We're also making sure our facilities remain safe, with a huge focus on process safety and asset integrity. A \$1 billion upgrade project to remediate 40 platforms in UK, Norwegian and Dutch waters is over 60% complete.

Meeting energy challenges

My third main point is that international oil companies – with their technologies and capabilities – must and will play a vital part in meeting future energy challenges.

Global energy demand could more than double by 2050 and the world will long depend on efficient fossil energy to maintain economic progress and enable the transition to lower carbon energy.

International companies have a key role in developing new supplies:

- locating new resources,
- investing to develop fields and increase recovery,
- creating new supply links, and
- opening up unconventional resources.

For example, Shell invested over \$18 billion in our upstream businesses last

“Europe offshore remains central to our strategy, and we still see many opportunities for applying our technologies, capabilities and capital. Expertise here in Aberdeen also plays an increasing role in supporting our global operations.”

“The world will long depend on efficient fossil energy to maintain economic progress and enable the transition to lower carbon energy.”

year and approved seven billion-plus dollar new projects. Between 2004 and 2010, our projects will open up some 20 billion barrels oil equivalent of new resources.

And we lead in developing the unconventional that will be vital for secure future energy – heavy oil, oil sands and shales, tight and sour gas, and Gas-to-Liquids.

International companies also have a key role in responding to environmental challenges, particularly climate change.

I believe that the climate debate sometimes focuses too much on long-range targets, and not enough on the practicalities of getting there. And there is too often a simplistic dichotomy – all fossil fuels bad, all renewables good.

There is certainly great scope for more efficiency, and renewables must play an increasing role. However, the ease with which renewable supplies can be developed is often overestimated, while the downsides of moving precipitately are underestimated. The impact of the present rush to produce first generation biofuels on grain prices and rainforest habitat is a warning.

Like other international companies, Shell is investing in renewables – in biofuels, wind, solar and hydrogen. This includes second-generation biofuels that won't compete with food production. However, renewables are unlikely to be able to supply more than 30% of the world's energy by 2050.

So, commercialising the technology to capture and store carbon dioxide from fossil energy must be a major priority.

I believe this industry must take the lead in making the case for carbon capture and storage (CCS). The Society of Petroleum Engineers (SPE) has a particular role here. Otherwise, the arguments will go by default.

In a world where carbon emissions are constrained, CCS technology will be essential for enabling many hydrocarbon projects to go ahead.

For example, the UK has set a demanding target for reducing CO₂ emissions by 60% by 2050.

Using CCS, emissions might be more

than halved with about 30% less fossil energy than today. Emissions reduction would also require rapid growth in both renewables and nuclear.

Without CCS, fossil fuel use would have to be cut by more than half. Nuclear would have to grow twice as fast – another 18 new Sizewell Bs, on top of the 18 new or replacement plants already required. Thousands more wind turbines would be needed. And a new vehicle fleet would have to run largely on biofuels and electricity, with petrol and diesel fuel almost completely phased out.

Achieving such a huge change in this timeframe would be hugely difficult. So, widespread use of CCS could clearly be an enormous moderator of the pace of this transition, and likely reduce overall costs to the nation ... whilst helping keep us all in business. So we should all be sounding this rallying cry.

I believe that a CO₂ 'cap and trade' system is the most efficient way of driving the adoption of abatement technologies in industry. And I'm glad that good progress is now being made in getting CCS included in the European scheme.

However, it will not enable the major demonstration projects necessary to test and develop CCS technology, nor drive the building of the necessary CO₂ pipeline infrastructure. I believe that governments have to play a direct role in these huge, long-term investments, as was done in building the European gas pipeline infrastructure in the 1960s and 70s.

There is of course the enticing possibility of using CO₂ for EOR, but only in limited circumstances. The inability to make proposed schemes in the UK and Norway viable illustrates the challenges.

Some CO₂ can indeed be sequestered in depleted fields. But, as an industry, we should make it clear that 90% will have to go into deep, saline aquifers. Not at all impossible. But not that cheap, nor simple.

What is clear is that if ambitious reduction targets are to be met, there has to be much more focus than today on the practicalities. This industry understands better than most the time required to develop new technologies

“The climate debate sometimes focuses too much on long-range targets, and not enough on the practicalities of getting there. And there is too often a simplistic dichotomy – all fossil fuels bad, all renewables good.”

“In a world where carbon emissions are constrained, carbon capture and storage (CCS) technology will be essential for enabling many hydrocarbon projects to go ahead.”

and create extensive infrastructure. We know there is no time to lose.

Responding to change

To conclude, do the international majors still have a role in energy industries? I think so. I believe that our capabilities are still wanted, and will continue to be wanted, perhaps even more than in the past.

At its heart, this is about one key characteristic, responsiveness to a changing world.

This year is the hundredth

anniversary of the coming together of Royal Dutch and Shell. It's a proud moment for us. But we wouldn't be here today if we hadn't been able to respond to the huge changes of the past century.

Of course, past performance is no guarantee of future success. But, rest assured, we are ready for the future!

And I am sure our industry has a bright future as long as it is responding to the changing requirements of our national oil company partners, of maturity, and of new world energy challenges.

“What is clear is that if ambitious reduction targets are to be met, there has to be much more focus than today on the practicalities.”

“Do the international majors still have a role in energy industries? I think so. I believe that our capabilities are still wanted, and will continue to be wanted, perhaps even more than in the past. At its heart this is about one key characteristic, responsiveness to a changing world.”

Recent speeches by Executive Directors

The Energy Revolution

Rob Routs



The resources trilemma between efficiency, social justice and security

Jeroen van der Veer



Six unvarnished truths – China and the global energy challenge

Linda Cook



Qatar - investing in a robust partnership

Linda Cook



Energy for the generations

Jeroen van der Veer



Changing the game through innovation and partnership

Malcolm Brinded



The future is gas

Jeroen van der Veer



NOCs and IOCs: partners with shared interests

Malcolm Brinded



Delivering technology—the key role of international energy companies

Jeroen van der Veer



This publication is one of a range published by Shell International BV, Carel van Bylandtlaan 30, 2596 HR The Hague, The Netherlands. For further copies, and for details of other titles available in English or as translations, please write to the above address, or contact the External Affairs department of your local Shell company.

Information about Royal Dutch Shell plc, including downloadable versions of various publications, can be accessed at:

www.shell.com/speeches

© Shell International BV (SI), 2007 Permission should be sought from SI before any part of this publication is reproduced, stored in a retrieval system, or transmitted by any other means. Agreement will normally be given, provided that the source is acknowledged.

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate entities. In this publication the expressions “Shell”, “Group” and “Shell Group” are sometimes used for convenience where references are made to Group companies in general. Likewise, the words “we”, “us” and “our” are also used to refer to Group companies in general or those who work for them.

These expressions are also used where there is no purpose in identifying specific companies.