Innovation and sustainability in a new energy world – strategies and initiatives from the IOCs

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Good morning everyone, it's great to be here. Thank you for the opportunity.

I would guess this panel has at least 150 years' experience of the oil industry between us.

That means collectively we have seen a lot of changes over the years, including a number of price crashes.

This current one has to be the fourth big fall I've been through in my career, so I think it's worth looking at this assumption about a new energy world – and asking the question, "What's different this time around?"

First of all, it's not really demand that's different – it's still going the same way it's gone for a century – and that's up.

Maybe not quite so fast as the 50-plus percentage growth over the past two decades – but it is still going up enough for us to estimate energy demand will be about a third greater by 2035 on current and expected trends.

That's driven by global population and GDP growth, with almost all of this growth stemming from developing economies, particularly China and India.

And the extra energy needed in 2035 is equivalent to about two-and-a-half times the current total energy production of the Middle East as a whole.

So we are not in a new world in terms of demand.

But where the picture does look different is on the supply side.

We are in a world where we are consistently finding more energy resources than we consume.

Since 1980 the world has consumed around a trillion barrels of oil. But its oil reserves haven't gone down by that amount – no – they've actually gone up by that volume – from 700 billion barrels to 1700 billion.

That's enough to meet over 50 years of future global production.

Then we have an environment with Chinese growth softening and supply increasing – the biggest factor being 4.5 million barrels of US tight oil production a day.

Over the past 5 years – because of the shale revolution – almost two-thirds of the increase in global supplies of oil and gas has been down to the US.

US tight oil may be only 5% of the global oil market, but the oversupply it prompted was the key factor in driving the collapse in prices last year.

So here we are in something of a new world.

Another significant change has been building for some time and that is the rising concern globally about carbon emissions and climate change.

This growing sense of urgency about emissions may well translate into policies with long-run implications for all fossil fuels.

In BP we see this new world as one in which prices will eventually recover, but this might take some time and prices are likely to remain volatile.

That means being in good shape as businesses and as an industry to provide value at the bottom of the cycle as well as the top.

With that in mind the next question is, "What does this new world really mean for those of us in International Oil Companies?"

First of all it means a big process of rebalancing, which is already well underway.

Capital discipline is key to that.

Across the supermajors, something like $80 billion of major projects this year have been cancelled or deferred – double that in 2013. Capex is down over $22 billion in 2015.

And that combination of course has consequences for people's jobs across the industry, as we make some difficult choices.

It is a tough time. But the collective experience of this panel will also tell you that we are a resilient industry and a flexible one.

Each company is making their own choices about where their own particular point of balance should be.

For us in BP we are looking hard at a number of factors

- at our geographic spread of assets,
- at our portfolio of asset types,
- at our distinctive areas of strength.

We're very focused on capital efficiency, and looking at how we can do things differently – collaborating where we can; standardizing equipment and processes where they can bring benefits without compromising safety.

Looking around the globe, every company has its heartlands – and one of those for us is right here in the Middle East.

We have a long history here and we're very proud of that – it's where we began as a company over a hundred years ago.

We have strong roots and strong relationships here, and those are really important for us.

In terms of our portfolio of assets, we look for a balance between

- conventionals and unconventionals;
- between gas and oil;
- and between operated and non-operated activities.
- And between operations that are very responsive to oil price movements and those that are less exposed – such as long term gas agreements and some PSAs.

Then there are those areas of strength you have as a company.

At BP we've blazed a trail in technologies like seismic imaging and enhanced oil recovery.

We've specialised for a long time in the management of giant fields.

And we've built up strong relationships that have stood the test of time. We get to celebrate a lot of milestones.

When the first airplanes were flying between from the UK and India, BP established a refuelling depot in Sharjah.

So our relationship with the United Arab Emirates goes back to the early 1930s

That brings me to a third question, which is "What does the new world of energy mean for the UAE and the Middle East more widely?

As we've just seen, about half of all the world's oil reserves are here in this region – and over 40% of the world's natural gas.

These are among the world's lowest cost barrels in some of the world's biggest fields – fields like Rumaila in Iraq, Burgan in Kuwait – and Zakum and Umm Shaif here in Abu Dhabi.

The images you're looking at are Das Island in the early 1960s and today – where oil and gas from Zakum and Umm Shaif is processed, stored and exported.

These are all mature fields but they are also fields with a long and productive life ahead.

The days of easy oil may be over, but technology and expertise are redefining production all the time.

In Rumaila five years ago, production was running at under a million barrels a day. Since then we have drilled 200 new wells and raised production to over 1.3 million barrels a day, and we expect that to rise.

That's been achieved by a strong focus on reservoir management and excellence in drilling in a three-way partnership with the South Oil Company, PetroChina and ourselves in BP.

In Oman not so long ago it didn't look like it would be economic to produce from the tight sandstone of the Khazzan field.

We're in the process of bringing in what we've learned in the US about hydraulic fracturing, and that is going to unlock a billion cubic feet of gas a day when production plateaus after first gas in late 2017.

Here in Abu Dhabi we're working with our colleagues in ADMA-OPCO in a number of different ways.

One of which is to develop a bespoke version of our LoSal® Enhanced Oil Recovery technology.

What you are seeing on the left of the slide is an animation of how LoSal® works inside the reservoir at a molecular level.

We have a terrific 3D animation you can watch on the BP stand in the exhibition – which is what the guy on the right is doing.

The ADMA-OPCO ambition is to take recovery rates up to 70% in the carbonate reservoirs offshore.

That's a great example of adapting to the new energy world.

The old convention was that about two-thirds of the oil in a reservoir would go unproduced – too difficult or uneconomic to unlock.

The new convention is that we can aspire to produce as much as two-thirds.

When you think about what that means it's extraordinary.

Every 1% increase in recovery here in the Middle East equates to between 16 and 20 billion barrels.

Or to put that another way – it’s like discovering a whole new set of supergiant fields.

Part of the new reality is that mature giant fields will continue to be productive for much longer, supported by advances in digital imaging, big data analytics and potentially new breakthroughs in bio and nano technologies.

Conclusion

To sum up then, we are in a new world with new economic realities.

It’s a world of growing demand with oil and gas in plentiful supply, but also with growing concerns about carbon.

The immediate response to that is to find a new point of balance – one that is resilient to the challenges of the new environment, and also flexible to the rise to the opportunities.

Here in the Middle East natural resources have helped to transform people’s lives over the past half-century and more.

That transformation will continue right through this century as we forge new partnerships between IOCs and NOC – and find new points of balance in the face of lower prices and tougher recovery challenges.

These are partnerships that share world-class technical expertise and world-class local capabilities and resources.

They are also partnerships of complementary strengths that work to the benefit of both companies and countries.

And no region is better placed than the Middle East to take advantage of the potential in greater collaboration.

Thank you.