



Bernard Looney IP Week - keynote address

Bernard Looney,
Chief executive, Upstream

22 February 2017





Introduction

Your Highnesses, Your Excellency, Ceri, Louise, ladies and gentlemen.

A very good morning to you all.

It's great to be here in such distinguished company.

And congratulations to Your Excellency for his extremely deserving award this morning.

I'd like to thank the Energy Institute for the invitation, and to recognise the tremendous work of the Institute - particularly on education and policy.

And what an impressive week Louise and the team have pulled together.

In BP we appreciate all that you do, and you have been kind enough to invite a number of us here today.

If you were early this morning, you may have already heard from our Chief Economist, Spencer Dale.

And our head of group strategic planning, Dominic Emery, is speaking this afternoon.

We did discuss whether we should all give exactly the same speech.

That would at least demonstrate our commitment to standardization.

But we have all sat where you are now, so we understand things from the customer's viewpoint - yes, even in the Upstream.

So you will hear something different from each of us - but as part of a common narrative.

I expect there is a common theme for all speakers today, whether they are from BP or from other organizations.

And that theme is the pace of change.

The energy landscape is changing at great speed.

We are in acceleration mode - and this is not just incremental change, it's structural as well.

Ours is an old industry - one that is used to change, but not always rapid or radical change.



While other industries have changed beyond recognition, our landmarks have remained broadly stable.

Offshore drilling is roughly as old as television.

Deepwater drilling is older than the world wide web.

Even the technology behind the shale revolution was first invented in the 1940s.

In other words, we have changed, but arguably on a different timescale to other sectors.

Until now.

Because now, we are seeing rapid and transformative change around us.

It's challenging. It's necessary. And personally, I find it exhilarating.

"Every generation needs a new revolution."

Thomas Jefferson said that over 200 years ago.

We are having our revolution right now.

And it means we are facing two huge challenges.

How do we succeed in an increasingly competitive environment?

And how do we play a role in the energy transition to a lower carbon future?

I want to look at those two challenges - Competitiveness and Carbon - and then another C - the Choices we make in response.

Competitiveness

We all know why the challenge of competition has come about.

Our industry may be an old one - but it has been a successful one. And in many ways, today's competitive environment is a product of that success.

In 1980 we had around 700 billion barrels of proved oil reserves. Now we have 1,700 billion.



Today there are more producible resources in the ground than at any time in our history - despite all the energy that has been consumed.

And the demand keeps on coming - concentrated in emerging economies.

There are more than 1 billion people in the world today still living in poverty. They need energy. They deserve the same opportunities all of us have.

Spencer will have said this morning that we expect demand for energy to keep growing at about 1.3% a year or 30% overall out to 2035.

However, it's a buyer's market. There is more than enough supply to meet demand.

Instead of consumers competing to access supply, producers are competing to meet demand.

We must not lose sight of that, especially just now, with oil prices looking to have stabilised a bit above where they were last year.

We need to use this period to ensure we are as competitive as possible to face whatever the future brings - while continuing to prioritise and improve safety.

And we still have some way to go.

You may have seen the McKinsey study that showed how the cost of a typical North Sea facility rose between 2000 and 2013.

Inflation pushed the cost up 44%. But the industry's own practices pushed it up a further 72%.

Think about that for a moment - 72% - directly related to what we now see as mostly inefficient practices.

That includes

- over-specification,
- extra documentation requirements,
- mounting project management costs,



- lower drilling productivity,
- lack of standardization,
- and little movement up the learning curve.

All leading to spiralling costs.

The report was called “Never let a good crisis go to waste” - a great Winston Churchill phrase.

And this crisis is an opportunity for the industry to significantly reshape how it works.

There is an endemic challenge for our industry - the issue of cost cycles.

As the oil price goes up, so do costs - far too easily.

As it comes down, so do costs - but with great pain, with jobs and livelihoods going and disruptions in producing regions.

It is imperative that we break that pattern.

Costs in other industries do not go up nearly as much as ours when prices rise.

Indeed, in manufacturing industries like aviation or the automobile industry, costs come down over time.

And at BP we have been looking to learn from high tech sectors and from manufacturers.

That includes our own Downstream. I’m spending a lot of time with Tufan Erginbilgic, who runs that business.

And what are we learning?

We know we cannot build tomorrow’s industry with yesterday’s tools.

But the good news is that we have a new toolbox.

And it contains the tools of digitization, simplification and standardization.



Digitization is a real game-changer.

As PwC said last year: "Digitization is nothing new, but the oil and gas industry has yet to broadly embrace its implementation on an end-to-end basis."

That's true, but we are now making up for lost time - fast.

Step 1 is to get people access to the data, in one place, available worldwide.

In BP we have built our own proprietary data lake.

We now have historical data for around 2,500 of our wells available to us in this data lake - digitized and available in the cloud.

Now we can begin to imagine just what's possible in terms of faster data-driven decisions about wells and reservoirs.

Big data is revolutionising big oil.

New software is scanning our infrastructure 24/7 - allowing our engineers to optimizing production in real-time.

There are big benefits for safety, reliability and efficiency.

Digitization has helped our Lower 48 operations in the US to improve capital efficiency by 53% and reduce production costs by 28%.

I could go on - but I am sure you are all on the same journey.

And the new toolbox is not all about computing. It's also what Bob Dudley calls "common-sense at scale".

That means simplifying the business by rethinking processes. And it means working with suppliers to reduce costs along the chain.



For instance, since 2014 we have reduced our inventory holding by around \$760 million, and in doing so, we have reduced the costs of running our warehousing operations by 40%.

In the Gulf of Mexico, we've saved \$200m a year in gross logistics costs by reducing the number of offshore supply vessels from 27 to 8, and the number of helicopters from 10 to 4.

But to achieve more fundamental advances, we are determined to emulate the best in advanced industries. And that is why I and members of my team have spent time with leaders of some of the world's most innovative companies.

In one event, we gathered together experts from Google, Rio Tinto, GE, McLaren, Phillips and Toyota at a three-day event to listen to their impressive collective wisdom.

In the quest for competitiveness, operators are generally in competition.

But there is also a valid place for collaboration - and that is in improving industry standardization. This reduces costs for everyone and benefits the consumer.

As you may know, leaders from several major operating companies are part of a new 'Engineering Leadership Summit' to drive collaboration in engineering across the industry. The initial focus there is on standardisation.

In BP we're also chairing another joint industry project called 'JIP33 - standardization of procurement specifications for equipment'.

That title is unlikely to quicken the pulse, I know, but the subject matter is very important. That's why there are now 17 participating operators.

Last year the JIP focussed on proving the concept of standardization by developing industry-wide specifications for ball valves, subsea Christmas trees, low voltage switchgear and piping material.



Moving forward, these specifications will be embedded across our industry and the team are keeping their foot on the gas, looking to develop more.

Carbon and the energy transition

Talking of gas, this is a good point to turn to my second challenge - the energy transition and the drive for a lower carbon economy.

This is to be welcomed for the sake of the environment. But we also need to understand what it means for our businesses.

The costs associated with renewables are falling fast.

Those of solar are down 80% in just five years. Onshore wind costs have come down by half in the same time.

Wind and solar are now cost-competitive with fossil fuels in many situations - as hydro has been for many years.

The growth of carbon emissions is slowing dramatically - from 2.1% a year over the last 20 years to 0.6% a year over the next 20, we anticipate.

However, that is not enough to meet the ambition set out in Paris in December 2014 to keep the global temperature rise below 2°C. Meeting that ambition means emissions falling by 2035.

Will that happen? We cannot tell. We will see different governments in different places with different approaches.

But policy is not the only lever for change. Technology is also advancing rapidly on its own.

The outcome is that we are going to see a changing mix.

Renewables will play a larger part, growing around 7% a year, but from a small base so they provide around only 10% of the world's energy needs in 2035.

Oil and gas will continue to be important. Even on a faster than likely track to reduce emissions, oil and gas are still expected to provide around half of the energy mix by 2035.



However, oil will be used much more efficiently. Our Energy Outlook estimates that oil will grow by just 0.7% a year.

In volume terms that is growth of around 15 million barrels a day to 110 million barrels a day by 2035.

That projection would be 17 million barrels a day higher if not for expected efficiency gains in internal combustion engines - and up to 1.5 million higher if not for electric cars.

We expect there will be around 100 million electric vehicles on the road worldwide by 2035, up from 1 million today. But for perspective, that's out of a global fleet of 1.8 billion.

By 2035, the main source of demand growth for oil will not come from cars and trucks and planes, but from petrochemical plants making plastics and fabrics.

Quite a turnaround for the fuel that powered everything from the Model T to the Moon-shots.

However, although flatter, the demand will still be there over the longer term.

What does that mean for us as producers? It means oil is a value play, not a volume one. But it's still long-term.

The winners will be those who get to market with their product most economically, year after year, for decades to come.

And what about gas? What does the future hold? It's different, in a few ways.

Demand for gas is growing faster than oil - we project 1.6% a year to 2035.

Natural gas is the power generation feedstock of choice for many places. It's a lower-emission alternative to coal. It's a flexible baseload back-up to renewables.

We still don't have a fully global gas market. Prices are typically set project by project. But the growth in LNG is increasing the accessibility of gas around the globe and leading us towards a more globally integrated gas market.

The winners won't simply be the most efficient operators.

They will be the ones who can assemble large-scale, long-term projects that take gas from where it can be most efficiently produced to where it is most urgently needed.

In the last decade that has classically been within the US. We are also seeing demand ramp up in China and expect to see supply rise there too as Chinese shale becomes a major play. And of course, Europe is also hungry for gas.

Choices

So, we have these two profound challenges - of competition and carbon - but we can see how to respond to them.

We all do that in different ways, so I'll focus now if I may on some of the choices we have been making in BP.

We know oil will play a significant role in the energy transition, so ensuring it is competitive will be important.

So we've made the choice to capitalise on our incumbency in key regions to extend access to competitive oil resources.

One example is the 10% interest we've been awarded in Abu Dhabi's ADCO onshore concession. It provides us with access to world-class competitive resources out to 2055 - resources we know well from working with a long term partner.

Similarly in Azerbaijan, we've signed principles of agreement to extended development of the ACG oil field out to 2050, with economics that will keep us highly competitive.

But as well as investing, being competitive also means making the choice to pull back when necessary.



And you saw this with our decision not to proceed with drilling in the Great Australian Bight.

This was a tough decision, but ultimately the project would not compete with other upstream opportunities in our global portfolio.

So what about competitive gas?

The role gas needs to play in the transition can't be overstated.

Gas is a cleaner, lower carbon alternative to coal, and is abundant in supply.

Gas is a growing proportion of BP's portfolio and six out of seven of our start-ups this year are gas projects.

We've added to our gas position in Egypt with a 10% interest in the giant Zohr field offshore.

We're working with CNPC in China to explore for shale gas.

We've increased our interest in Oman.

And we are very excited about the new access we have with Kosmos in Mauritania and Senegal. We think this is a basin with enormous potential to produce significant volumes of gas very competitively.

These are just some of the recent choices we've been making and we will be sharing more of our plans with the market next week when we deliver an update on our strategy.

Conclusion

So let me conclude by observing that this century will not just be about big oil, but smart oil.

It will mean harnessing all the gains offered by digital, producing barrels based on value rather than volume, and learning from smart people, regardless of the industry.

To me, it's about hearts and minds.

We have the heart - the desire to meet these challenges. And we have the minds to make it happen. Our industry has a long history of adapting to change, and we have the capability to do so again now, and at pace.



Which is why I am confident of our ability to meet the challenges head on.

So let's embrace the new era, not wait for it to be thrust upon us.

Having recently watched the movie 'Jackie' I am reminded that JFK said: "Change is the law of life. And those who look only to the past or present, are certain to miss the future."

We don't intend to miss the future in BP - and I'm sure none of you do either.

I'm excited by the challenge and confident that together we will make the right choices.

Thank you.