

ENERGY TRANSITION

Racing ahead



Bob Dudley, BP Group Chief Executive will be speaking about the future prospects for the oil, gas and energy sector at IP Week on 26–28 February 2019.

The global energy sector is transitioning to a low carbon future. How do you feel about the pace of transition? What are BP's main priorities for change and the likely timescale?

The world is facing a dual challenge – lowering carbon emissions while meeting growing demand for energy. What sets this transition apart from previous ones is the scale of the task – energy demand could grow by around a third by 2040, the equivalent of adding another China and EU on top of today's demand, while at the same time carbon emissions need to reduce by about 50% to be consistent with the Paris Agreement.

Renewables will undoubtedly be important in helping meet this aim but, while the pace of the industry is fast, energy transitions don't happen overnight, so we will need

fuels of all kinds for some time to come. That's why we believe the focus should be on a race to lower emissions, not just a race to renewables.

BP's approach to helping advance the energy transition is to focus on lower carbon right across our business. We believe we have found a way for us to help meet the dual challenge – by reducing emissions in our operations, improving our products to help customers to reduce their emissions, and creating low carbon businesses. Reduce – Improve – Create.

Our report on *Advancing the energy transition*, which we issued in April, explains how we're backing this up with a set of targets that are near-term, tough, but achievable – including a goal of zero net growth in our operational emissions out to 2025. So even as we grow, our emissions won't.

What does 'digitalisation' mean to BP today? How much is being invested in new physical infrastructure, for example?

The oil and gas industry produces a huge quantity of data; from complex geophysical and seismic data through to information from the sensors throughout our plants and operations that increasingly measure physical conditions 24 hours a day. BP recognises the tremendous opportunities that digitalisation offers to help us use that data in ways never previously imagined.

One way we do this is by using a 'data lake', which receives a huge number of new records each day – around twice the daily traffic on Twitter. We are learning from industries inside and outside the oil and gas sector how digitalisation can increase our ability to identify opportunities quicker; to increase the reliability and efficiency of our operations and, most importantly, to make BP safer.

We have developed new digital applications with industry leaders such as Baker Hughes GE, to apply machine learning and artificial intelligence (AI) to the way we run some of our most complicated operations to provide greater predictability and allow

preventative action before events occur. We've also designed a highly-sophisticated simulation and surveillance system, called APEX, which recreates every element of a real-world plant in digital form. Using this, production engineers can run detailed simulations of real-life situations that used to take hours in just a few minutes. And we are growing our use of AI, advanced robotic sensors and blockchain applications across our businesses – Upstream, Downstream, Supply and Trading, and Alternative Energy.

How do you see the role of international oil companies (IOCs) developing in this rapidly changing energy landscape?

We believe IOCs are actually well positioned to not only participate in, but to help advance the energy transition. Our industry has a long tradition of providing the energy to help the world prosper – with heat, light and mobility – and we aim to continue this pivotal role in society.

For BP, we believe our strategy is fit for the dual challenge and we are working to factor in low carbon across the whole business.

We believe collaboration is an important part of the way forward, within industry, such as the Oil and Gas Climate Initiative (OGCI) – which now has 13 members, representing 30% of global oil and gas production – and also with bodies such as the World Bank's Zero Flaring Initiative, and the UN's Climate and Clean Air Coalition.

But we also believe that effective partnerships with governments are vital, as they can set the policies that incentivise carbon reductions.

We want to make a constructive contribution to those efforts, as well as responding to the low carbon opportunities they create. ●