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It is time to close this first part of the discussion and move to the second one, focusing on energy security and sustainability.

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I shall speak to you about international oil companies and how an international oil company can adapt to the new energy landscape. First I wanted to show you the evolution of price and costs.

When you look at the price of oil, you see a very strong decline during the last 18 months. There was already a crisis 7 years ago, with a strong drop in 2008, but it was very short, and it was due to the fall in demand. Today, it is quite different. It is much more a supply-crisis, because there has been in recent years a strong increase in light tight oil supply in the US.

And when you look at costs, you see that the costs have been much less reduced than price. Oil price has dropped by 50% and costs have declined by just 20% for the moment. Even though costs have declined more than in 2008, there is still a gap between the fall in price and the decrease in costs.

This means that big oil companies still have to adapt and still have to continue to reduce costs, to try to ensure a better organisation. They also need to pressure service companies. The situation is not so good for the energy sector, as every company needs to take into account these new conditions.

When we look at the evolution of the markets, we can see every reason to continue to maintain the pressure, as the supply continues to be higher than the demand. In the medium term, some drivers do point to some increase in price, because today's investment is strongly reduced. One of the tools of many companies, either international or national, to answer today's situation and improve your balance sheet is to reduce capital expenditure. When you reduce investment, the impact is not immediate but it is delayed by two or three years. So in the medium term, there could be some tensions in the markets, especially if we add the reaction of light tight oil in the US market, where you could have a significant decrease in the future years.

Here is the composition of oil and gas production, reserves and investment between the majors, national companies and independents. Majors are at about 11% of oil production or oil reserves (the figures for Total being around 1%). But national oil companies, including OPEC oil companies, represent around 30% of production, but not far from 70% of reserves. Capital expenditure for the different types of companies tells us a different story with major companies contributing around 20% of the global investment. National oil companies are investing much less, especially companies from the OPEC countries.

This means that when you have very long reserves, you do not need to invest a lot, which is the case for OPEC national companies. And for new resources, you still need major oil companies and independent companies. International oil companies specialize in developing new resources. And light tight oil is a new resource, but as Antoine Rostand said a few minutes ago, still quite limited.

And you still need to invest a lot, as the time life of hydrocarbons fields is limited (from 10 to 20 years, with the exception of the Middle East). There is a global natural decline rate of oil production of around 4-5% per year (4-5 Mb/d). It means that in the future, in the next three or five years, we still need much more new projects than light tight oil to be able to balance the market. The new barrels brought by light tight oil, at a level of 1 Mb/d, are insufficient to



meet the new demand and compensate for the national decline of oil. New development and new projects, in every types of oil resources (deep water...) are still needed to balance the market.

Really, on supply, some impacts are deferred: the delay between the beginning investment and the first drop of oil is often over two or three years. As a lot of projects have been launched in the past years, significant new production is still arriving on the market this year, maybe next year. However, investment braking will have consequences in the future. And this behaviour is not only specific to international oil companies. It is also true for national oil companies like Russian and Chinese oil companies, and even in most countries.

In today's conditions, almost all these companies and specifically national companies have exactly the same constraints as international oil companies. In the recent past, Chinese companies in particular were quite heavily subsidised by their Government. They were generally able to take new resources at a high cost. Now, maybe because they are so big and also because the conditions of the market are much harder for everybody, they have to compete on the same conditions as international companies. This means that there is now so much advantage in being a Chinese company more precisely, operating outside of China. In Africa, South America and everywhere, there will be much more competition between international companies and these national oil companies.

International companies have sought to adapt their long term visions to the global environment and to the climate change issue. When we look at this year forecast from IEA, it includes three main scenarios, the new policy scenario, the current policy scenario and the 450 scenario (with is a two-degree scenario compatible with IGCC objectives). The first remark is that, even in the two-degree scenario, fossil fuels and in particular hydrocarbons still have a strong role in 2040.

And one lesson from the COP21, it is that the engagements taken by all the countries are stronger than the vision that the IEA developed in its median scenario. This is already a success from the COP21, because the awareness on emissions reduction by all the countries is stronger than the IEA was forecasting.

The second remark is that one important way to reduce the role of coal. We have seen recently that shale gas has allowed the US to replace production of electricity by coal with production by gas. The US was the only country to decrease its CO₂ emissions in the recent past.

What can we say as a major international oil company? We have to adapt to these new conditions. How do we adapt? We should not favour the use of coal. The second view is that when we look at the transition, the better fossil fuel is gas, so we must give some priority to gas. When we look at gas, our vision is that gas can still offer strong growth as a fossil fuel. By replacing coal, we can allow for a fast decrease in CO₂ and still maintain the use of hydrocarbons.

At the same time, gas is very often a cheaper solution to limit CO₂ emissions in the near future than renewables. Solar and wind continue to be more expensive in the short and medium term than gas. So the most efficient scenario for reducing CO₂ emissions should be to use gas, until the cost of these renewables has decreased sufficiently for them to be competitive.