



### Bertrand BADRÉ, Managing Director and Group Chief Financial Officer, World Bank

These three speakers were just as interesting as the first three speakers, but less disciplined in terms of timing. I will open the floor for questions and comments.

#### Marie-Claire AOUN, Director of the Center for Energy at Ifri

I am Marie-Claire Aoun and I am the Director for the Centre for Energy at IFRI. I have two questions and the first one is this. You mentioned gas as a bridge fuel for energy transition. We heard this in the first session, when Antoine was saying the price of gas would probably be low in the long term. I also know that several oil companies have called for a carbon price. I was wondering whether a combination of the two, a carbon price plus possibly a lower price for gas in the long term, would finally create the right conditions for gas to play its role as a bridge fuel. We accept it in the US, but it did not happen elsewhere. I was wondering whether these two conditions would be enough.

The second question is to Mr Tanaka. You are calling for a combined approach in energy security and sustainability, as we had in Europe. Unfortunately, this approach is criticised a lot in Europe, especially when we are talking about an impossible trilemma. This is between our objectives of competitiveness, energy security and energy sustainability. I was wondering whether you see something that can be done better in Asia. This is in order to avoid this failure, or not very successful European energy policy in any case.

# Marcelo SANCHEZ SORONDO, Chancellor, Pontifical Academy of Sciences and Pontifical Academy of Social Sciences

The Guardian has published a study done by the Monetary Fund, which talked about which energy is the most economic. In reality, it is the most costly, because it is subsidised. I want to know if this is true.

# Nobuo TANAKA, former Executive Director of the International Energy Agency; President, The Sasakawa Peace Foundation

The gas price is certainly a slightly different animal from oil, especially in North America. The IEA predicted that a golden age of gas would come, with question marks. It has certainly come to North America, but not to other parts of the world. The gas prices is so low in the United States, thanks in part to the very high oil price, because the gas sometimes comes with liquid contents, wet gas. The wet part of gas can be sold as oil price, and the very high price of oil makes it possible for gas to be supplied almost for free, as associated gas. Even if there is no pipeline, they burn it. In that sense, the gas price is so low, thanks to the very peculiar situation in North America. This will continue for the foreseeable future, as long as there are enough gas sources.

On the other hand, the Asian economies suffer from a very high gas price, the so-called Asian gas premium. The marketing hub of the pricing means just getting of the so-called control of the destination for the long-term contracts. Some reform of the market is necessary to make the pricing of gas much more reasonable. Also in Japan, we are only importing gas through LNG, and that is a problem, because Europe has LNG in pipelines from Russia and North Africa.

This kind of competition makes their gas prices much cheaper than in Asia. We are a little more expensive than the United States, so the US competitiveness with this very cheap shale gas is creating industrial relocation from Europe as well as from Japan to the US. Petrochemical industries are moving away from Europe and Japan to North America these days. It is a great successful North America.



Regarding your second question, thank you very much. Asia needs to have some more different strategies and I understand this, but the European model of collective security and sustainability is certainly a very interesting start. I raised this issue in Seoul, Moscow, Beijing, Shanghai and everywhere, and it is welcomed. The only place they do not welcome it is in Japan. The Japanese audience always says, 'Mr Tanaka, it is impossible. How can we trust Russia, Korea or China'? This is the reaction from the Japanese.

We have to change our mindset and have a more open mind. The only way of reducing risk or enhancing energy security on the other hand, is by diversifying sources and modes of supply, including pipelines, gridlines, LNG ships etc. We are starting with this kind of discussion in Asia and especially starring with Russia as an energy bridge. We are also talking with Korea, about the common role of networking with gridlines, pipelines and some common ideas of regulation or sharing. These kinds of first steps must be designed for further development of that visionary system.

### Bertrand BADRÉ, Managing Director and Group Chief Financial Officer, World Bank

Do you want to say a few words on the IMF study?

### Masood AHMED, Director of the IMF's Middle East and Central Asia Department

We did do a study which looked at energy prices and subsidies around the world. In fact it is the case that if you look at the impact from the subsidies, the gains from the subsidies do not go so much to poor people, because they do not consume so much energy, but to the richer people who tend to consume more. In Egypt, according to a household survey conducted in 2008–09, the poorest 40% of the population received only 3% of direct gasoline subsidies, 7% of natural gas subsidies, and 10% of diesel subsidies. This is one reason why the subsidies reform begun by the Egyptian government in 2014 is so important.

The other problem it creates is that it creates an industrial structure which is based on getting subsidised energy. This is not competitive if you actually charge the real energy prices. Today for example, if you were to look at where the energy consumption is growing fastest, it is in the countries of the Middle East where energy is subsidised a lot. By some calculations, in 10 or 15 years, this will eat away a lot of the oil that they are currently exporting. I can give you more details, if you like.

### Pierre SIGONNEY, Chief Economist, Corporate Strategy Department, Total

Maybe I can add a point about subsidies, after that point about carbon press. First, about subsidies, we have seen recently that with the fall in oil price, many countries have already limited their subsidies.

In some cases, subsidies can still be useful, for example for people to buy liquefied petroleum gas (LPG) to eat or to cook, instead of using wood.

And some big oil and gas companies are organizing themselves in the Oil and Gas Carbon Initiative (OGCI) to find ways to limit the impact of their activities on climate change. European companies in particular are studying the use of carbon price or carbon mechanisms, maybe some kind of carbon tax, just to limit the impact of fossil fuels on  $CO_2$  emissions. An adapted level of carbon price or carbon tax can drive a different use of fossil fuels, more compatible with the climate change issue.