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Briefing

PRESENTATION OF A REVIEW OF THE WORLD MARKET FOR OIL AND GAS

Securing Global Growth

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Medium-Term Oil and Gas Markets 2011 provides a comprehensive outlook of oil and gas fundamentals up to 2016. The oil market analysis covers developments in demand on a product-by-product and key-sector basis, as well as a detailed bottom-up assessment of upstream and refinery investments, trade flows, oil products supply and OPEC spare capacity. The gas market analysis covers a region-by-region assessment of demand, production and infrastructure investment, price developments, and prospects for unconventional gas and the globalization of LNG trade.

Panelist:

Nobuo Tanaka, Executive Director, International Energy Agency

G. Frost:

Good morning, ladies and gentlemen. Welcome to the International Energy Agency's (IEA) launch of The Medium-Term Oil and Gas Markets Outlook.

To my far right is Mr. Nobuo Tanaka, the International Energy Agency's Executive Director. To his immediate left is Mr. Laszlo Varro, head of the Gas, Coal and Power Markets Division at the IEA. And to my immediate right is David Fyfe, head of the Oil Industry and Markets Division at the IEA.

I will now hand the microphone to Mr. Tanaka, who will give a very brief overview of the report, and then David Fyfe will speak, followed by Laszlo Varro.

Thank you very much.

N. Tanaka:

Thank you very much. I am very pleased to be here in St. Petersburg attending this Forum. And I am very happy that so many people came to the launch of our Mid-Term Oil and Gas Market 2011 Report, in which, following a pioneering launch last year, we have once more combined our mid-term projections for both the oil and the gas markets.

The oil and gas markets are facing divergent evolutions. Oil's twilight as an industrial fuel continues and its use is becoming even more concentrated in the transport and petrochemical sectors. Gas use, on the other hand, continues to increase in the power generation sector, as well as in industry and space heating.

In terms of market structure and pricing, oil is genuinely a global commodity, while gas markets, although becoming globalized, remain bound by some key regional constraints, not least in terms of transportation.

What the two markets do share, however, are a number of key future changes, including, as you are all quite aware, the uncertainty of the

economic environment; the need for sustained investment in new supplies; devising strategies for improving energy use and efficiency; and the need for broader and deeper data on both markets to allow investors in both fields to better plan for the future.

For both the oil and gas markets, 2010 was characterized by the sharp recovery of the global economy after the recession of 2009. But the two markets have gone their separate ways in recent months.

On the one hand, oil markets have seen surging demand growth in emerging markets, outstripping growth in supply, and pushing prices higher, even before the conflict in Libya tightened supplies further. Oil prices at around USD 100 per barrel are weighing down an already fragile macro-economy and the financial situation in the OECD, pressing national budgets in the non-OECD, and encouraging price increases in other commodities, as well as fuelling political concerns about speculation.

On the other hand, demand for natural gas has recovered to well above pre-financial crisis levels in most major regions, but the unconventional gas revolution and ample LNG supplies have led to different supply and pricing patterns at regional levels.

The gas markets have tightened in Europe and Asia, where prices are about twice the levels seen in the United States. But even in those markets, gas prices remain at around half the level of current oil prices.

In both oil and gas, we see a notable dichotomy between non-OECD and OECD markets, with demand driven by China, India and the Middle East. This is especially visible in the case of oil, where OECD demand is declining. OECD demand for gas continues to increase driven by the increasing competitiveness of this energy form in the United States, as well as declining nuclear production in Japan and Germany. But nonetheless, growth in demand is dominated by emerging markets, especially China.

In terms of supply, the issue is not an inadequate resource base for

either oil or gas, but about timely and adequate investment. While the supply side has so far been able to cope with the impact of the Libyan conflict, as well as implications for gas demand of lost Japanese and German nuclear production, that should not lead to complacency.

Project lead times remain stretched, and investment has to match not only increasing demand, but also the sizeable volumes of productive capacity being lost every year due to mature field decline.

Furthermore, in the era of the Arab Springs and the Fukushima disaster, we need no reminders of the ever-present possibility of game-changing events that can cloud the supply-demand outlook.

From a demand perspective, continuous economic recovery should bring renewed demand growth, concentrated in the non-OECD countries; but the projected level of demand growth is not set in stone. Different combinations of GDP growth, and oil and gas intensity, point to a number of different potential market outcomes.

Suddenly, we see a significant risk of current oil prices having a detrimental effect on economic recovery and thus on medium-term oil and gas demand.

For the longer term, greater attention to improved end-use efficiency and diversification of fuel supplies could maintain more comfortable markets for longer than traditional analysis expects.

Finally, we need to mention the importance of improvements in both oil and gas market data if we are to genuinely understand what the future may hold.

I would now ask David Fyfe, the Editor of the Oil Section of the report, and then Laszlo Varro, head of the Gas, Coal and Power Division, to take you through the main highlights and findings in our Mid-Term Oil and Gas Market Report.

Thank you very much.

D. Fyfe:

Thank you, Mr. Tanaka.

Good afternoon everyone. And thank you to the organizers of the Forum for inviting us to discuss MTOGM 2011 with you.

I am going to spend 10 minutes talking about some of the key oil market conclusions from that report, and Laszlo Varro will talk you through some of the gas side. And then we will have a Q&A at the end.

Obviously, we have seen a very sharp rise in crude oil prices since autumn 2010. We at the IEA would argue there has been a very sharp tightening in market fundamentals to the tune of about a million barrels per day on average in the second half of 2010, and we think, at least directionally, that explains some of the run-up in prices in the second half of last year.

We have had the Libyan crisis, the loss of one and a half million barrels per day of supply, and fears about contagion within the MENA region, as well as concerns about what looks like runaway non-OECD oil demand growth which has sustained prices at or above USD 100 per barrel.

As Mr. Tanaka mentioned, some of the risks which these high prices are bringing to the global economic recovery are fairly clear.

The bottom line is, this year, our price assumption – and I would stress it is an assumption – which is taken from the Brent futures strip, is around USD 20 per barrel higher than when we undertook the same exercise back in November-December, and in June 2010. So we are working with a price assumption of just north of USD 100 per barrel on an underlying basis.

In this year's report, as in previous years, we have tried to take a look at some of the drivers of oil prices. I think there is a popular belief that fundamentals do not really matter anymore and it is all about exchange rates and speculation within the market.

We would say the futures markets and financial flows into and out of commodities clearly have a short-term impact on prices. But empirical

research tends to suggest, firstly, that causality may flow from oil prices to exchange rates rather more than in the other direction.

Secondly, if you look at volatility in the purest sense of the term, volatility is not demonstrably higher in 2011 than it was for much of the past decade. We did see a surge in market volatility in 2008-2009, but that proved temporary.

Commodities are inherently volatile, and particularly commodities that are so 'price inelastic', such as oil. I think we need to bear that in mind when we are considering what is happening in terms of price dynamics.

Nonetheless, there has been a lot of interest regarding many of the new participants in the derivatives markets, new financial players on the rise, and non-commercial activity, and whether this represents excessive speculation within the market.

But when you look at that quite closely on a statistical basis, looking at the speculative index, relative to the risk-hedging appetite within the market, it is not demonstrably the case that there is excess speculation within the crude oil market at this time. The speculative index rose through 2008, but on a trend basis it has actually declined since then. So I think we need to be careful about our terms, and so on.

Our argument would be that you still have to look at today's fundamentals, and expected future fundamentals, to get a reasonable idea of price direction, if not the absolute level of prices within the market.

And what about those market fundamentals looking forward through 2016? All of our forecasts in this publication are looking to 2016. We have seen spare capacity squeezed within the oil market, partly after the Libyan crisis, and a lull in new OPEC capacity build. We basically see a tighter 2010-2012 oil market than we were expecting six months ago.

Having said that, there is a flip-side. Higher prices in the range of USD 90–110 per barrel, are prompting a response from the supply side.

There is no reason to be complacent about that, but we are seeing higher levels of supplies than we were expecting 6 to 12 months ago in the international market.

This year, as in previous years, we are running two different and distinct economic growth scenarios to look at the impact on oil demand. I will talk about that in more detail in a moment, but you can see in the higher GDP case – the base case – we have a fairly stable picture overall in terms of OPEC spare capacity, fairly close to about four million barrels per day, which is pretty close to spare capacity today.

If GDP growth eases, for whatever reason, we may see slightly slower oil demand growth and we could have a bit of a breathing space from some of the relentless upward price pressures that we have seen in the market over the last 6 to 12 months. I think the caveat there is that we obviously need investment in supply to continue if we want more stable markets going forward.

If we look at global oil demand, as I have said, there are two scenarios. High GDP and relatively high levels of improvement in oil use efficiency give you oil demand growth of 1.2 million barrels per day every year, and takes us to about 95 million barrels per day by 2016.

In this instance, income growth is the key driver, and it is outstripping high international crude prices, partly because of the existence of subsidies in some of the developing markets, where oil demand growth is going to be concentrated. In the lower GDP case, rather slower oil demand growth closer to 0.8 million barrels per day annually, albeit there is a slightly lower growth in oil intensity improvements over the forecast period.

The difference between these two scenarios is about two and a half million barrels per day by 2016. It may not seem like very much, but it is an important marginal amount of oil, which will help determine the shape of the oil market balance going forward.

There are common features in both scenarios. Very clearly, the growth

in oil demand is all coming from the non-OECD space, from the emerging markets and from China, Asia, and the Middle East, which together account for nearly 95% of net growth in oil demand over the forecast period.

As Mr. Tanaka said, it illustrates the importance of more and better data from the emerging economies if we are going to understand what is driving market dynamics in oil, and indeed in other fuels, going forward.

As I said before, the presence of subsidies, and the expectation that they will not be dismantled overnight, allows oil demand to continue to grow, despite an oil price of USD 100 in the international market.

The transportation sector is key, and that is where, looking forward, there are few short-to-medium-term alternatives to oil. 65% of expected growth in demand comes from transport and around 40% comes from gas oil and diesel. Oil really is the fuel of choice in transportation, but it also has a high degree of flexibility in fuel-switching applications as well.

So, looking forward, it is going to be key in terms of driving oil demand growth through 2016. And particularly as marine bunker fuel specifications tighten in the years ahead. That is going to add extra demand impetus from gas oil and diesel at the expense of residual fuel oil in the international market.

If we look at oil supply, we have a more robust picture than last year, partly borne out of higher prices. We have average growth in supply capacity of about 1.1 million barrels per day, per year, through 2016. And interestingly, the 2015 oil capacity number is now about two million barrels per day higher than we had even six months ago.

The growth is split: it is non-OPEC, it is OPEC crude, and it is OPEC gas liquids. And natural gas liquids are becoming an increasingly important part of the supply mix going forward.

Most of the upside sensitivity compared to our previous forecast is within non-OPEC, where the impact of higher prices and higher spending is beginning to be felt. But as I said before, I think it is

important not to be complacent. The industry still loses around three million barrels per day every year because of mature field decline.

So you have a three-to-one mix in terms of what the industry has to do in terms of investment to meet oil demand growth and mature field decline. I think it is therefore very important to not be complacent about the supply side going forward.

There is some detail on where the growth is likely to come from. I think within non-OPEC, the Americas are going to be the focus for growth, and particularly this year we have a more optimistic view on the light tight oil or shale oil from onshore in the USA, which we think could grow by around a million barrels per day in the outlook period.

Within the non-OPEC folds, in terms of supply growth we see the focus on Brazil, Canada, Colombia and the USA, so a real 'Americas' flavour. We think that the FSU, Russia, and the Caspian Republics will take a bit of a breather in terms of their contribution to supply growth over this five-year period going forward.

When we look at OPEC, we think of Iraq and we assume that they can get to around 4.1 million barrels per day of crude productive capacity by 2016, a bit less than the government target plans for. The UAE and Angola are also significant sources of new crude capacity.

OPEC NGLs are growing just as fast as OPEC crude capacity over the outlook period, as natural gas is developed in the Middle Eastern economies, both for LNG export, but also, importantly, for incremental domestic use, which Laszlo will talk about.

Overall, oil supplies, the feed stock slate that the world's refineries are going to be dealing, with is getting lighter, but it is also getting higher in sulphur, on average, over the forecast period.

Not surprisingly, supply lines are stretching. International crude trade is going to grow – we think, by a net one million barrels per day overall by 2016. It is a little bit less than last year, partly because some of that crude is going to be kept or retained within the producer countries

themselves, refined domestically and exported as product. That is a trend that we see persisting over this outlook period.

It is no surprise that the Middle East is the largest swing supplier in our outlook, with Asian sales rising by about 1.7 million barrels per day, and African exports rising by a similar amount. It is all going into the non-OECD. And imports to the OECD are actually declining.

Interestingly, although long-haul trade is increasing because there is substantial growth in the global tanker fleet, we think tanker market economics are going to remain under pressure over this period to 2016.

OECD refining remains a business under pressure. There are some glimmers of hope from growing middle distillate demand, and indeed, from the fact that national oil companies are buying up some distressed capacity in Europe and elsewhere.

The bottom line is there is a tidal wave of new-build capacity in refining in Asia and the Middle East, which is going to put utilization rates in the OECD under intense pressure between now and 2016. We think there is a potential refining capacity overhang of as much as four million barrels per day by 2016.

So finishing up, there is a higher price assumption this year to the tune of about USD 20 per barrel. We have tighter market fundamentals for the 2010-2012 period. We think those fundamentals are still the key to price direction, despite some other influences on prices.

High prices and strong economic and oil demand growth can coexist for a while because of the inelasticity of oil prices in the short term. However, the longer that we have a USD 100-plus oil price, the economic risks remain skewed to the downside, and that should also ultimately spur greater efficiency gains within the oil economy going forward.

When you look at oil demand growth, it is a story of Asia and the Middle East, the transportation sector, and middle distillates, in terms of driving all of the growth going forward.

Income trumps high international prices in the emerging markets, where subsidies persist. Higher prices are also bringing forth new supplies and helping stem mature field decline. The Americas are the focus for non-OPEC growth. And Iraq and gas liquids are where the action is happening in terms of OPEC capacity growth.

As I said, OECD refining remains under intense pressure. Ultimately, this market is going to find a new equilibrium point. It is very difficult to say at what price that will end up in the short-to-medium term, but it will depend, crucially, on today's investment in new capacity for production and also continued investment in improving end-use efficiency.

So thank you for listening and I will pass on to Laszlo.

L. Varro:

Thank you very much. Ladies and gentlemen, I am pleased to present our gas market outlook in Russia, a country which, in 2010, retook its historic position as the biggest gas producer in the world, after briefly losing it to the United States in 2009.

In 2010, it was not only Russian gas production that recovered; the entire global gas industry saw an amazing recovery, with a 7.4% jump in global consumption.

In 2010, global gas consumption was at the same level it would have been based on the pre-financial crisis growth trend. So, in fact, gas production is at exactly the same level as if the financial crisis had never happened.

We should be a bit careful, because 2010 saw an unusually cold winter in Europe and Russia. Of the 230 billion cubic metre increase in demand, roughly 30 billion was generated by the unusually cold winter and heating season. But even taking into account the temperature, there is no doubt that there was a very rapid recovery in demand.

Production increased in all major regions, even in Europe where it is usually in decline. In North America, the shale gas revolution continued

in full swing. North American shale gas production jumped by around 50 billion cubic metres, compensating for the decline in conventional gas production in the USA and Canada. So North American gas production increased overall. And there was a massive wave of liquefied natural gas (LNG) supplies, primarily from Qatar, hitting the global gas markets.

In terms of pricing, we have seen convergence and divergence at the same time. The convergence of pricing is taking place between Europe and Asia, and also within Europe, where in 2009 we saw a large difference in prices between the United Kingdom and the European continent. In 2010, this price differential disappeared. There is a very simple explanation for this. The United Kingdom is part of Europe. It is not part of North America.

So in the European gas markets we are seeing increased improvements in efficiency and liquidity; and the arbitrage fading eliminated the price differential between the UK and the Continent. That stabilization took place at a very heightened level due to the spillover of high oil prices into oil price index gas contracts, which are still very important in Europe, as well as due to the tightening markets.

In Asia, oil price indexation is also prevalent, so prices are ever rising due to the higher oil prices. But, again, there is increasing convergence between Europe and Asia due to LNG trade. Last year, we saw the first arbitrage trade of an LNG cargo redirected from a European port and re-exported in Asia. But, more importantly, the emergence of Qatar as a supplier, which is able to flexibly change its exports between Asia and Europe, is a very important new phenomenon.

On the other hand, in North America, due to the shale gas revolution, prices stabilized at a level roughly half of the European or Asian prices due to the marginal cost of shale gas production. And in fact, today, the price differential between the United States and Europe is bigger than the cost of liquefied natural gas exports from North America to Europe. So those investors who believe in the stability of this price differential

are very seriously thinking about LNG export projects from North America.

In the next five-year horizon, we project a dynamic increase of gas consumption all around the world. Gas demand is projected to increase by 2.4% annually, so gas will continue to increase its share in the global primary energy mix.

During this five-year time horizon, there will be an increase in demand of 510 billion cubic metres, which is around two and a half times current Russian gas exports. So this is a very dynamic increase. And for the first time in the history of the gas industry, China is emerging as the most important driver of gas demand. China alone accounts for almost one third of the global increase in the demand for natural gas.

The second biggest source of natural gas demand increase is the Middle East, where demand is driven primarily by power generation, petrochemicals, and the chemical industry. But we also see increasing demand in North America where, due to the low prices, gas is increasing its market share in electricity generation as well as in the chemicals industry.

One important point to make is that even with the German nuclear moratorium, European gas consumption is stagnating at the 2010 level. But we should keep in mind that the 2010 level was much higher than the long-term average, because of the exceptionally cold winter.

Our projection is based on average winter temperatures. And with the average winter temperature, we have European gas demand just reaching the 2010 level in 2016. In the OECD regions, power generation is the primary driver of natural gas demand.

In the past 10 years, natural gas increased its share from 16% to 21% in the OECD power generation fleet, and this is going to continue in our view. Combined cycle gas turbines are the most popular and most widespread technologies among the new power generation capacities.

On the other hand, we should keep in mind that electricity demand

increase in the OECD is generally quite low. And we foresee a very rapid penetration of renewable energy in the electricity systems of the OECD, especially in Europe, but also in the United States.

In fact, we project a 500-terawatt hour increase (roughly the electricity consumption of Germany) in renewable power generation in the OECD and Asia in the next five years. Now, due to the low increase in demand for electricity and the rapid increase of renewables, if nuclear generation and tidal power generation are constant, then gas has to take market share from coal and oil in order to increase its share in the electricity mix.

Gas is now taking market share from oil, so oil will continue to decline in electricity generation. But with the current prices of natural gas, coal, and carbon dioxide in Europe, natural gas will find it very, very difficult to compete against coal. So the increase in the share of natural gas in electricity generation will not be as rapid as some might hope.

On the other hand, nuclear power generation is not constant. We have seen a major loss of nuclear power generation in Japan due to the Fukushima disaster. Fukushima is the plant where the nuclear disaster happened, but several other nuclear power plants were also shut down in Japan due to various safety upgrades and repairs. There was also substantial damage to Japanese coal fire power plants.

Altogether, Japan has to replace around 40 gigawatts of base load power generation, which will generate 11 billion cubic metres of additional Japanese gas demand. This is roughly equivalent to one average liquefied natural gas project.

In Germany, seven gigawatts of nuclear power plants were already shut down. Another 15 gigawatts will be decommissioned by 2022. And given the speed of renewable energy deployment in Germany, in the next decade, renewable energy will replace nuclear power there. So even with very intensive investment, it will take a decade for Germany to replace its current nuclear power generation with renewables.

Consequently, carbon dioxide emission reductions will have to be delivered by natural gas and by a coal-to-gas switch, because even in 2022, the share of fossil fuels in the German electricity mix will actually be higher than it is today because of the nuclear moratorium.

In our view, that will generate at least 16 billion cubic metres of additional natural gas consumption depending on the success of renewable energy and energy efficiency.

In the non-OECD regions, there is demand in all of the sectors, but power generation is the most important sector in the non-OECD region as well. We also foresee a rapid penetration of natural gas in Chinese household consumption.

China today has 22 cities which have a population of more than one million and which are not connected to the gas grid at all. So given the climate conditions of China, it will not only be industrial and power sector demand but also residential demand increasing in that country.

On the supply side, the two most important supply sources are the Middle East and the former Soviet Union - Russia and Central Asia. But the Middle Eastern production increase will be less than in the past five years. In the past five years, we have seen a very rapid increase of gas production especially in Qatar, and there will be a slowdown in Qatar in the next five years. Also, a substantial proportion of the production increase of the Middle East will be absorbed by the rapidly increased demand in the Middle East. So we do not foresee a large increase of Middle Eastern gas exports.

On the other hand, the former Soviet Union – Russia and Central Asia – will increase their exports very rapidly. We also foresee the emergence of Australia as a very large gas exporter on the base of liquefied natural gas projects.

The non-commercial gas revolution is continuing. There are over 400 trillion cubic metres of non-commercial gas resources. Half of that is shale gas. In North America, LNG imports are at a technical minimum

and several serious projects are under consideration for exporting LNG from North America. But even with those LNG projects, we foresee North America remaining a low-price gas island.

We now foresee shale gas production outside the United States as well, but the USA has a very, very favourable and very unusual combination of a good geology, a very supportive energy policy and regulatory framework, a good pipeline infrastructure, and also a gas service sector that is able to support this project.

This combination is very difficult to replicate, so those shale gas productions will emerge outside the Unites States, but they will not be as rapid and as revolutionary as it was in the USA in the past couple of years. In our view, the most promising countries in this respect are China and Poland.

There have been a lot of discussions recently on the environmental impact of shale gas production. Our view is that the two key technologies of shale gas production – horizontal drilling and hydro-fracturing – have been in use in the oil and gas industry for decades. These are complex technologies that provide adequate safety and environmental safeguards. With adequate environmental safeguards in place, we see no reason why these technologies should be dangerous. So we believe that shale gas can be produced in an environmentally safe and sound manner.

Now, turning to our host country, Russia, and the former Soviet Union in general, production will, in our view, increase by 130 billion cubic metres. The most important source is Yamal. Yamal is a new super-giant field in the north-central region of Russia, which is just coming into production. We foresee a production increase of over 50 billion cubic metres from Yamal.

As for the other Russian projects, the growth of independent production mainly focuses on the decline of Gazprom super giants. 90% of Russia's production increase is coming from Yamal. This is the most

important project by far.

As regards stockpiled LNG, which is a technically very, very difficult project, we do not foresee it becoming operational in the next five years. Moreover, pipeline exports to China from Russia might take place in the long term, but given the project management difficulties, they are not included in our five-year time horizon.

On the other hand, we foresee a rapid increase in gas production in Turkmenistan, primarily on the basis of exports to China. But we do not foresee Turkmen gas getting to Europe during this projected time horizon. We expect production increase from Azerbaijan, but again the Nobuko pipeline and European exports are not included in the baseline projections for the next five years.

The other very exciting country apart from Russia is Australia, which is emerging as a second Qatar, with very large LNG projects. Australia is also the testing ground of pioneering new LNG technologies including coal bed methane-based LNG, as well as being the location for the development of the world's first floating LNG project. So the growth of Australian LNG export will be instrumental in servicing the growing import demand in the Asia-Pacific Region.

So, this is our outlook for gas. Thank you for your attention, and we will be more than happy to take questions.

G. Frost:

Before we begin questions, let me just make a couple of comments. One is that this Oil and Gas Markets Outlook is actually available for sale on the IEA website, www.iea.org. There are copies of the overviews from each gas and oil section on the shelves at the back.

Mr. Tanaka will have about five minutes to answer questions, so we would like to direct any initial questions to him. We will give preference to journalists, so if there are any journalists who would like to ask questions, please let us know.

There are some microphones coming up. Journalists, we would be very grateful if you could identify yourselves and the publication that you are with.

J. Smith:

Jeffrey Smith with Dow Jones. How concerned are you by the signs of strain within OPEC over the last week and their failure to agree on an increase in supply?

N. Tanaka:

Well, we are concerned with the speed with which OPEC can provide to the global market, and we have been hearing a lot that they are going to do provide by increasing their production.

The Saudi oil minister clearly mentioned that they will provide using their spare capacity. We believe what they are saying, but at the same time, how fast and how much can they do? So we are carefully assessing the current market situation.

And we know that if the current level of price continues, it is really detrimental to the global economic recovery. We also know that if this level of price continues, the oil burden is as bad as 2008, and we know that 2008 was a very hard landing scenario.

We prefer a soft landing for the global economy by providing more oil to the market, and we feel that some impact is already being felt by the major consumers. European economies are, in some places, shaky. It is not the quota, but the production of these countries that may be affected.

M. Akon:

Melissa Akon from Reuters News Agency. To follow up on the last question, I wanted to ask how you will determine when and whether Saudi Arabia is providing enough additional oil to the market.

I would also like to ask you to comment on the Saudis' allegation that talk of releasing additional reserves is war on OPEC. Does this not go somewhat beyond the IEA's formal mandate?

N. Tanaka:

Regarding the first question we have to monitor the situation. We know that the Saudis are receiving the demand and request for the delivery, and we will see how it is going to be delivered to match the demand, which is of a cyclical nature.

We know that refineries in Europe and globally are coming back from maintenance, and compared to the second and fourth quarter, the call on OPEC supply increased, in our judgment, by about one million barrels per day. OPEC is also saying that it is increasing by 1.8-2 million barrels.

So this gap should be filled fairly quickly; the test is in the market, in economic growth. I would say that we are observing and monitoring the situation carefully.

As for the second question, yes we are ready to act at any time if necessary. We are just watching the situation carefully.

G. Frost:

Any other questions? We probably have time for one more question for Mr. Tanaka.

L. Ching:

Li Ching from China's Tai Ching Media. My question is about China's economy which has been showing signs of slowing. How will that impact on the demand for oil and gas in the world market?

N. Tanaka:

We are seeing in our monthly report that, compared to the last TIS,

China's growth is declining. But it is still growing.

So the major part, or all, of that increase in the oil demand comes from non-OECD countries, and China is a very important part of that. And we are certainly watching carefully to see what the impact of the government policy is on these anti-inflationary measures etc. So, certainly, this may have an impact on global oil demand. And we believe that growth in China is very important for the global economy, and we want to see good economic progress there. This is definitely, I would say, something that the global community needs.

At the same time, we want more data from China because we do not know the stock levels, the actual stock movement in China. And without knowing stock inventory levels, how can we assess consumption properly? So we always ask the Chinese authorities to provide us with good data, because the majority of oil demand will come from non-OECD countries after 2013-2014, according to our projections. So without knowing majority stock levels, how can we produce a good assessment of the overall market? That is our request.

G. Frost:

Thank you, Mr. Tanaka. Are there questions for Laszlo or David? Laszlo has some additional comments on Chinese gas.

L. Varro:

Yes. China currently faces a very serious electricity shortage. This is estimated to be around 40 gigawatts. And also, in the current five-year plan, Chinese energy policy has very ambitious plans to reduce dependency on domestic coal mining.

The energy value of coal mining in China is currently more than 20 times domestic gas consumption. So even if the growth of total Chinese energy consumption is slowing, but gas is taking market share in the very, very large Chinese energy system, you still have dynamic growth

of Chinese gas consumption.

G. Frost:

Any other questions? Yes, there is one more from Dow Jones.

J. Smith:

This question is for Mr. Varro. I would like to ask you what consequences you see for the European power market as a result of Germany's decision to accelerate its exit from nuclear power.

How much extra transmission capacity will be needed? How much replacement generation capacity will be needed? And is the German government's target of replacing most of this lost capacity through renewables at all feasible?

L. Varro:

Well, the first thing to keep in mind is that Germany is not an island. It is at the heart of the European electricity network, and is very well interconnected in every direction. Also, Germany, and the European continent in general, has excess generation capacities, because European electricity consumption is still below the 2007 pre-financial crisis level, and even during the financial crisis we saw an increase in renewables.

So the key question is not whether Germany can replace those nuclear power plants, but how Germany can replace its nuclear power plants and decrease carbon dioxide emissions at the same time, because in 2010, Germany had 16% renewable energy and 23% nuclear.

If they go to 35% renewables, which is their policy target, but zero per cent nuclear, the share of fossil fuels will actually *increase*.

If they continue with the current renewables investment programme, by 2022, they will reach that 35% target. So you could say that they are on track. Germany has a feed-in tariff policy which is very successful in

attracting investment into renewable energy.

They will need to update the transmission system. This is absolutely clear. Germany has a cluster of nuclear power plants in Bavaria and Winterburg, in the southern part of the country, and they have very ambitious plans for offshoring power from the North Sea.

So they will need to upgrade transmission in the north-south direction. This can be done. The key issue is not the investment or the engineering. The key issue is getting the transmission licences and the permissions for construction.

So, all in all, our view is that reaching the decarbonization targets without nuclear power is not impossible, but it is more difficult, more challenging and more expensive.

G. Frost:

Any other questions?

A. Marsh:

Alastair Marsh from FT Tilt, the Financial Times. Russia is on the verge of signing a gas deal with China. It could possibly happen this week. Would you be able to talk about some of the implications and the significance of that for Russia?

L. Varro:

Yes. As I mentioned in the presentation, in terms of the 2016 time horizon, we did not include pipeline exports from Russia to China in our baseline forecast, because these are quite difficult projects.

You need the major pipeline systems to bring production into new gas fields. Also, the distances are quite large and the infrastructures are quite underdeveloped.

Having said that, we certainly see China emerging as a very large gas importer. And Russia certainly has the resource base to increase

exports. In our view, if and when Russian gas exports to China materialize, that will be coming from the production in new fields in the East Siberia region.

We do not foresee existing production in West Siberia being redirected from Europe to China. That is quite unlikely in our view. Certainly, Russia has a very large potential resource base in the East Siberia region, but very large investment in some very difficult projects will be needed for it to be realised.

G. Frost:

Thank you very much again for joining us today for the launch of the Medium-Term Oil and Gas Markets Outlook.