## KS Kim, ExxonMobil Gas (India) Private Ltd. $3^{rd}$ IEF NOC-IOC Forum, June 11, 2013, New Delhi, India

I am pleased to participate in the 3<sup>rd</sup> International Energy Forum, promoting cooperation between national and international oil companies.

Here in Asia and around the world, national and international oil companies face the continuous challenge of supplying the world's energy demands. However, we have discovered that time after time we have been able to meet that challenge. Today we see technology unlocking vast new resources throughout the world, creating a rapid transformational energy change.

In our annual Outlook for Energy we assess energy supply-and-demand trends through the year 2040. The Outlook projects that by 2040, global energy demand will be about 35 percent higher than it was in 2010. Over the same time period, global gas demand will rise more than 65 percent, and worldwide electricity demand is expected to grow 80 percent.

Specifically, India and its Asia Pacific neighbors will see energy demand double from 2010 to 2040. What will drive this energy trend? Population growth and economic progress.

For example, here in India, population will reach about 1.5 billion by 2040, and energy demand over this period will increase about 140%, primarily in electricity generation.

Natural gas demand in India triples from 2010 to 2040, supported by growing domestic production and imports. Domestic gas production continues to climb, but at a slower pace than demand. As a result, India and its neighbors will see a growing reliance on gas imports, especially LNG, which meets nearly 40 percent of the region's demand in 2040.

ExxonMobil expects that the reliance on natural gas will likely be a common theme in the forecast for global energy demand, since few resources match natural gas's availability, versatility, and flexibility. Also its affordability and environmental benefits – including 60 percent fewer emissions than coal when used for power generation – make it a winning, long-term proposition for the future.

So who will supply this natural gas? Among growing sources of natural gas, unconventional resources are becoming increasingly important. In North America, we expect shale and other unconventional resources to account for nearly two-thirds of production by 2020, offsetting conventional field decline and securing almost 100 years of supply at current production rates.

In fact, the United States – historically an importer of energy – is now positioning to become an exporter of LNG. And the potential exists for new unconventional discoveries in Europe, Africa, Latin America and here, in Asia.

That said, we still expect the majority of global natural gas production to come from conventional resources, as it will take time to understand the geology and specific technology required to economically produce unconventional resources

in other parts of the world. Also, availability of skilled service providers and infrastructure are essential to sustainable production.

Regardless of where the supply comes from, however, getting natural gas from resource to market is by no means a simple process. It holds some additional challenges and complexities that have to be managed.

For instance, gas is technically more difficult to move and store, and therefore, more expensive to transport than oil. Oil infrastructure is mature and allows for a global liquid market, while the infrastructure for gas continues to be built out.

And when we add to the equation the execution of a full-scale grassroots LNG project – we soon realize that it creates a much more challenging business proposition.

As you know, these facilities are complex to build and operate, and usually require concurrent and interconnected projects ... upstream development, liquefaction, ships, terminals, pipelines ... costing tens of billions of dollars ... along with an international commercial structure to form the value chain that delivers the gas to the customer.

So how can we manage these risks and complexities to ensure a successful natural gas project? The answer can be boiled down to three main elements:

No. 1 – We need a proven, robust, quality resource...

No. 2 – We need an experienced developer with the technical and commercial expertise who understands the buyer's needs and manages the risks to deliver the resource to the buyer's market...

And finally...No. 3 – We need governments that adopt wise energy policies, embrace free-market and free-trade principles, and honor the sanctity of contracts so the parties can create a durable, financeable international value chain. This last component is perhaps the most crucial...

Companies looking to make the large-scale investments previously mentioned will be seeking – above all else – long-term stability and predictability that will ensure a return on their investment.

As such, if governments cannot help to ensure this stability by implementing predictable, sound energy policies, their nation's resources may not be developed.

Countries with strong energy sectors understand that increased investment and healthy competition stem not from overly burdensome government regulation...but rather from free market solutions.

Looking forward, ExxonMobil will continue to evaluate new opportunities around the world, including India. No one can say for sure where our industry will evolve next. But we do know what can position us for the next stage in our changing energy markets.

The best way to deliver that energy is for IOCs and NOCs to continue to do what we do so well – achieve alignment, develop new technologies, manage risk, and continue to improve our operational and environmental performance.

Neither NOCs nor IOCs alone can deliver the energy the world needs to grow and prosper. It's more important than ever that we work together to combine our unique strengths.

Thank you, everyone, for the opportunity to share these thoughts. I look forward to your questions.