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As a former Executive Director of the IEA, I will use lots of IEA information. There is something interesting about the newest world energy outlook, which was revealed recently, about two weeks ago. The growth happens in Asia, in developing economies, and India, not China, will bring the largest increases up to 2040. That is the very interesting story. China has played a very important role in demand increase, but India will surpass that. This is a very new situation.

Another thing is about where the oil comes from. I have given you last year's world energy outlook. We need about 14 million barrels per day up to 2040. Other than the US, Canada, Brazil and the Middle East will decline. The North Sea, Mexico and China will reduce their production. The shale oil production in the United States will diminish too, but gradually. It will not last longer of a few decades. It is a matter of decades for which US shale production will have a prominent role. Canadian oil sand still continues to grow, but much less than what we need to fill the gap. Brazilian deep sea is important, but we still need a huge amount of oil from the Middle East. Half of the oil in the Middle East is from Iraq, so can Iraq still continue to supply this much? It is an interesting question.

This scenario comes before the low oil price, because it was done last year. This year's world energy outlook tells us about the low price scenario of about USD 50 per barrel, which will continue far into the 2020s. What does it mean? The demand will grow more and high-cost producers like the US, Canada and Brazil will diminish the productions. This means we have to heavily depend on the Middle East in the future.

However, as everybody has discussed here, the Middle East's revenue from lower oil prices means they may decrease their expenditure on social stability as well as military expenditure. The world needs to depend much more on oil from the much more unstable Middle East. This is a geopolitical risk of the low price scenario for the future. This is the geopolitics of gas and oil, because we need to depend on oil and gas. It is about three-quarters, even at the 2040 power energy supply.

I have outlined the conventional users, who are importers of gas and oil. Japan and Korea are stuck at 100%, because we cannot get worse than that, while the United States is going the other way around. I have outlined the conventional exporters, the US and Australia. Geopolitically, the US is located in the middle range between exporter and consumer. This means that the United States no longer needs to worry too much about the Middle East or Russia. However, conventional importers need Russia as a very substantial exporter of gas and oil in the future.

I strongly believe that the Ukraine issue is important, but nobody discussed it yesterday in relation to Russia. Russia is now more necessary to stabilise Syria and not only that, but it is a very important supplier of energy to China, India, Asia etc. Let us leave the Ukraine issue to Europe, and we need Russia as a major conventional supplier of energy, to reduce the dependency on the unstable Middle East.

I have outlined where the Middle East oil will go, the current situation and the situation up to 2040. The point is that the United States will no longer need oil from the Middle East. Will the US continue to keep the peace in the Middle East or free navigation in the Straits of Hormuz under these circumstances? Japan must prepare to send mine sweepers in case we need to. This will probably be in collaboration with China, India and Korea.

China certainly has a strategy of energy security through diversifying the sources with One Belt, One Road. However, it certainly raised the concerns of the neighbouring countries, as well as the United States. I have taken information from the report to the US Congress by the Department of Defence and from the IEA's information about technology perspectives. Huge investment is necessary for renewables.



There is also carbon capturing and storage, for coal users as well as gas users, and huge investment in nuclear. For sustainability's sake, this is very difficult. It is not impossible, but it is very difficult. I raised a question to Laurent Fabius at the Ministerial Meeting of the IEA's dinner about why France is not putting serious emphasis on nuclear power in COP 21. He gave a diplomatic response, but regarding nuclear, I am especially in favour of the sustainable technologies, which Korea is pushing. It is necessary for the future of the sustainable and peaceful use of nuclear power.

Japan has the problem of connectivity. To use renewables much more dynamically, we need a big market, but Japan has two frequency zones in the East and West, which are not connected to each other. This created the blackout after the Fukushima accident. Connectivity issues are very important in energy security and there is also sustainability in using more renewables. That gives a very interesting hint that connectivity or networking of the energy will be a very key method of security, which offers sustainability at the same time.

I have given the ranking of self sufficiency of energy, including fossil fuels and natural energy sources. Those countries who lack these resources will use nuclear power. Japan and Korea find it difficult to maintain sustainability and security without nuclear power, which is obvious. The European case is very interesting. Each European country has a very different portfolio of energy sources, but as an average, each has about 50% self sufficiency, as well as very well-balanced energy sources. Europe is not so average, but countries connect with each other through pipelines and gridlines, so Europe is achieving the collective energy security and sustainability. This is a very important model for anybody else.

The United States can achieve sustainability and security by itself, thanks to the shale revolution. Their gas price is so cheap, because of the very high oil prices, and the gas is associated gas, so it is almost free. That is sheer luck for the United States, while other countries should do something different. I have outlined the European model of connectivity of gridlines. Germany, which is in the middle of this system, can phase out nuclear power just by buying nuclear generated electricity from France. Japan cannot do that, because it is not connected to Korea, Russia or China.

Europe is thinking of connecting further, to North Africa or the Middle East, to import wind and solar energy sources. The Spanish Energy Minister said to me, 'Mr Tanaka, this is energy for peace. This is a similar context to Atoms for Peace'. I said, 'Why is this energy for peace, Mr Minister?' This is a grand reconciliation of Christians and Muslim. Good luck. That is what I told him. It is difficult to achieve a long-term vision, but it gives you a very important hint. I strongly believe that the expansion of the European Union to cover Turkey and the Middle East is the only way to bring stability to the region. The power sector will give you a very important hint of what Europe should do. It should create a new Roman Empire.

Let us try to make it happen in Asia, which is considerably different. There are European and Russian pipelines and we need Russia. This is an idea of pipeline connection which has been designed by Japanese professors. This model has already been established in China. China has a pipeline connection with Turkmenistan, Myanmar and will eventually be connected to Russia and thanks to the Ukraine sanction, Russia needs Chinese demand. China will be a hub for pipelines in the future. Japan is still staying outside this network and Korea is too. We need to develop and connect those gridlines, as well as pipeline systems.

A visionary idea has been proposed by Masayoshi Son. His idea is importing electricity from Mongolia, generated by wind or solar. He called it the Asian Supergrid. It is still visionary. Why not? Russia wants to sell renewable hydro-power sources to Japan by connecting gridlines. We call it a power bridge between Russia and Japan. The European Union was created by the European Coal and Steel Community (ECSC). This controlled and managed coal, iron and steel building between France and Germany, rather than having them kill each other. This was after the Second World War and made a great success for European coordination and in creating a union.

Europe is moving into the energy union, with the further integration of their system. Why not start the same thing in Asia, by coordinating energy sources in power lines or gas pipelines as such? As President of the Sasakawa Peace Foundation, I am promoting the idea of peacemaking in Asia, starting with the energy sector. This is the kind of geopolitics we have discussed in this conference. The energy sector could be a very interesting first concrete case in which we may work together.