

NOBUO TANAKA

Former Executive Director of the International Energy Agency; Chairman of the Sasakawa Peace Foundation

I am Nobuo Tanaka. I am the Chair for Workshop 2, Energy and Climate. The unpredictability in the energy sector is a huge issue, especially as this is triggered by the new president Trump, or his geopolitics.

When I was the Head of the International Energy Agency in Paris, I was invited to the G8 Summit lunch in L'Aquila, Italy, in 2009. It was a big lunch hosted by Prime Minister Berlusconi, and many African leaders were also invited. The guy who was sitting next to me was Gaddafi of Libya. I had a good chance to talk with him about the common friends, El-Badri, the Secretary General of OPEC. Gaddafi raised his hands, and he started talking about the problems of Africa caused by the colonialism of the western countries. Nobody can stop him; he is talking, talking, talking for 30 minutes. Berlusconi cannot stop him. When he finished, Zuma, Mubarak, all other African leaders echoed him. Colonialism is the problem. Then came newly presented president Obama of the United States. He raised a hand. 'Yes, I know the issue of Africa because my cousin is Kenyan, but he told me that the problem is corruption. He had to pay a bribe to the government officials to get a job, so corruption is the issue, but corruption did not come from colonialism'. That is what Obama said. This is a fantastic discussion, and then came Merkel, Sarkozy, Brown, and all said, 'Right, corruption is the issue'. The discussion moved away from colonialism to corruption, but the problem did not stop there. Gaddafi said, at that time, at the lunch, 'I was asked by the US and the UK to convince North Korea to stop their nuclear development', just as he did, but he failed, and some friend of Gaddafi told me that Gaddafi, until the last moment, never thought the United States would come to kill him, and this sent a huge message to North Korea, unfortunately.

In North Korea, Kim Jong-un is now saying he will never repeat the mistake of Hussein and Gaddafi, and is continuing his work on nuclear weapon development, and my concern here is that the Obama administration did not think about the North Korean impact of their decision of intruding into Libya, and if Mr Trump copies the same mistake of Obama and nullify the agreement with Iran, it will again send a huge negative message to North Korea, or whoever, to try to develop their nuclear weapons.

The linkage of geopolitical risks in North Africa and the Middle East has now spread to the Far East, with the North Korean crisis. This is an issue of energy and geopolitics globally now, so Mr Trump is creating huge unpredictability in energy security, but what is his impact of withdrawing from the COP21 agreement recently? Our discussion shows that, certainly, it impacts the Paris Agreement, and especially in the financial agreement, but the market is moving toward a cleaner economy, such as the blue states, especially in the United States, which will never retreat from the very stringent rules of the climate change mitigation, or carbon emission reduction, and companies will follow to develop more electric vehicles, or cleaner renewable technologies, and still the very stringent CAFE standards for the future must never be withdrawn. In addition, the one big element in the United States is very cheap natural gas. The shale gas revolution makes gas so cheap that it replaces coal, and Mr Trump will try to help the coal industry, but probably the economy market will never, ever let coal come back again, so Trump's withdrawal from the Paris Agreement has some impact, but probably the energy sector market will follow the very stringent current, or trajectory, towards a cleaner economy in the future. That is one of the very surprising but interesting conclusions which we have discussed there.

Coal is a problem. China, India, Asian countries will continue to use coal, because it is cheap and abundant, but it is full of CO2 emissions, air pollution, so some kind of new technology, cleaner coal technology, or carbon sequestration and storage, is necessary, though it is very costly. The Norwegian government succeeded by huge carbon taxes of \$60 per tonne, and Statoil of Norway is starting CCS as a commercial venture, so it depends on the government's determination to really reduce CO2 emissions from coal, or some gas. Interestingly enough, some of the panellists said, in our workshop, that Germany cannot phase out coal, because of labours, coal miners, so Germany committed of course to the COP process, and they can phase out nuclear, but they cannot phase out coal, so it is not Mr Trump,



but Germany that is dragging its feet for that agreement, for the future of the COP21. This is a very interesting finding for me.

Renewable energy is coming on very strongly. Technologies, the cost of photovoltaic systems is coming down very, very fast, so can we achieve 100% renewable society in the future? This was one of my questions to the panel. Yes, it may take time, and it may have a cost implication, but people are saying, yes, it is possible to reach renewable 100%, depending on the country, depending on the region, depending on the resources of the country. A Moroccan expert came in. In Morocco, the success of the solar power is enormous, because in the auction in Morocco, the cost of solar energy which came into the market was just 3 cents per kilowatt hour. This is the cheapest cost of solar energy in the world, by the way, so in Morocco, they are aiming at 52% renewable energy for power generation by 2030. This is a great opportunity for some countries, even in developing countries, to move away from coal or fossil fuels to the renewables, if the government has the determination to do so.

Nuclear power is a problem. After the Fukushima accident in Japan, the cost of nuclear has moved up. Westinghouse is in collapse, and probably the big light water reactor cannot be built in the OECD countries anymore. The exception is probably the UK, but how many reactors they can build is a big question, so maybe it is China, India and Russia who will build more and more reactors, but we are afraid that Korea, Japan, Taiwan and the US building new reactors to replace the old ones may not necessarily be a good case. We need to find more sustainable nuclear power: passive, safe, proliferation-resistant, with easy waste management – these kinds of new technologies – a small modular type, so we have to change the paradigm of nuclear to be accepted by public opinion.

We may need more hydropower. This is another green energy, but environmentalists of many countries are against building hydro dams. Will peak demand for oil come? This is another question I raised to the panellists. Many of them said, well, it may take time. Not easy, but Saudi Aramco came to Japan about a month ago, and hosted a big seminar about hydrogen, because they think that electric vehicles will become very substantial in Europe, in China, in India, and that, eventually, internal combustion engine vehicles will be replaced by electric vehicles or fuel cell vehicles. This means a big, big threat to the survival of Saudi Aramco. I asked this question to Patrick Pouyanné during the dinner debate on the first day. Saudi Aramco, at least there is a chance that peak demand of oil may come much earlier than we are expecting, so we have to prepare for that kind of situation, even though the common stance of energy-related people is that this is not happening so easily, so the corporation should prepare for the energy future.

Very interestingly, Patrick Pouyanné's initiative in Total is such that he created a department called 'Strategy and Climate', so his idea is incorporating climate mitigation situations into the corporate strategy, so integrating these two together. Total has a very high internal carbon price, \$35. When they try to invest into new technologies or new ventures, or new upstream/downstream projects, they will charge \$35 of carbon from the possible revenue to them, so this kind of policy or strategy is a very, very significant change. The climate change people are trying to introduce carbon pricing by emission market, or carbon taxation, but we never succeeded for more than two decades. Probably it is very difficult to harmonise this kind of institutional carbon-related strategy, but if corporations are setting internal carbon pricing, and the financial market will judge, evaluate the corporate strategy of ESG investment – environment, social and corporate governance strategy –, ESG will be the criteria for the future investors. Japan is moving to ESG by the GPIF, the government pension fund is now putting ESG as a major criteria for their investment, so financial impetus to the companies will make climate change mitigation much, much more possible in the future, regardless of what Mr Trump will do, what the German government cannot do, regardless of the government action, maybe this is the future of the emissions trade – I would say, climate change mitigation.

The final comment from me is that even with this reality, governments can play a very important role. When I was the Head of the IEA, I was always saying that government policy must always be predictable or stable, if possible. The private sector invests in energy infrastructure, but it lasts 40-50 years if governments take a policy of on/off, on/off on their energy related issues, because energy policy is very political, in many cases. Nuclear, this is the case. Renewable, this is the case. Hydro dams are difficult. So if governments change their policy, who in the private sector will invest for 40-50 years? So the government should certainly play a role. International coordination is necessary, but private sector efforts will yield a very significant improvement for the future of climate change mitigation. Thank you very much.