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I wish the optimism of Lee Hye-Min and Olivier would come true. Of course, we hope that these aims that we all support will become reality in spite of Trump's opposition. However, I am somewhat more pessimistic in that I share André's views. If you lose an engine of change and this engine happens to still be the most powerful country in the world, it is hardly imaginable for this not to have an impact, even if individual US states and cities – and we all mention this phenomenon in some sort of auto-hypnosis – are fighting it. Well, even if they all do their homework, there is no overall leadership coming from the United States.

I appreciate what you said about the German leadership at G20 and also in Marrakesh a year ago at the COP. There, the German government said, 'We will fill the vacuum of the United States leadership'. But, in all fairness, Germany cannot do that – it lacks America's power. And other countries might be tempted to hide behind the United States' decision. Mr Lee, allow me to come back to South Korea, where last year, at the World Knowledge Forum, we discussed the Korean path towards Paris. To be blunt, there was not the slightest hint at how Korea – which depends very much on fossil fuels and has a strong traditional industry – will meet these ambitious goals.

If I look at Germany, my own country, which is perceived as a frontrunner in climate protection policies, it has set out the aim to reduce its own CO2 emissions by 40% in the year 2020 in comparison to 1990 and was widely recognized for 'great German leadership'. However, if you look at the figures today, at the end of 2017, we have merely reached 28% instead of the 40% – we are far behind schedule. Without having shut down the East German coal power plants after reunification, we would not even have made it this far. We still have over 40% coal in our electricity mix despite a very positive increase of renewables. This is because the latter happened at the expense of gas and to the benefit of cheap coal. Only cheap coal and subsidised renewables were able to survive on the German energy market. The overall result: great advancements in the field of renewables, but no progress when it comes to reducing the reliance on coal. This is not very impressive and is not a model for the rest of the world.

I am very sorry to say that about my own country, especially as I am a supporter of Mrs Merkel, of this government. However, I was in parliament for 20 years and I know how politicians act because I was a politician myself. If it is difficult to reach an aim until 2020, what do you do? You set an even more ambitious goal for 2050 so that everybody says, 'Wow, these guys are really dedicated to changing something', but you know you will not get to be judged on whether you were able to achieve it or not. This is the situation not only for Germany, but for the whole world. The UN Development Programme came out with a study this week saying that 'If we continue like this, we will end up at the end of the century with three degrees average temperature increase and not 1.5'. Therefore, I think it is time to become more realistic.

Again, I am very much a believer in climate change. It is an enormous task. I also believe in climate policies, but I think we are far too optimistic in our aims and we concentrate much too much on renewables. Renewable energy is important. The future is with renewables. But if we were to get rid of coal power plants, starting with the dirtiest ones, we would do much more to prevent climate change than with many new programmes of renewable energy. Take coal out of the market and substitute it with gas. The United States is an example. We criticise Trump's policies, but in the last eight years, the coal share in the energy mix of the United States has shrunk from 51% to 31% – 20% in eight years. This happened because of the shale gas revolution: gas substituted coal and reduced CO2 emissions by 36%.

Germany is always the frontrunner in rhetoric, as opposed to the United States. But if you look at the real figures, it is exactly the opposite. If you look at Britain, it is pretty much the same situation. In Britain, in the beginning of the 1990s, we had the 'dash for gas', during which coal was substituted by gas. They introduced combined power and heat turbines in their gas power plants, modernised, and pushed coal out with a British carbon tax, thereby



enormously reducing their CO2 emissions. Therefore, I believe we should look more at gas. The international community has a tendency to say, 'Coal, oil and gas are all fossils. They are bad and renewables are good'. I would say that coal is bad, that we will continue to need oil for a long time, especially in the developing nations, but that gas can be a low-emission partner of renewables in the long run.

For instance, in Germany, and it is true for many other developed countries, if in households and industry we substituted our old oil heating systems, our old gas heating system, modernised them, we would be able to very quickly see the benefit of these low-hanging fruit for climate change. We should not set ambitious goals, but concentrate a little bit more on what we can do in the next few years to come. Thank you, Mr Chair.

Nobuo TANAKA

Yes, thank you very much, Friedbert. You sound a little more optimistic about the US decision. The golden age of gas in the United States helped to mitigate their CO2 emissions by replacing old coal power plants. Trump has tried to help coal, but I think it is almost impossible, so maybe using cheap gas makes a really good policy there.

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Sure. I agree with your point of view. What Trump did was he took a couple of coal representatives and put them into the Environmental Protection Agency, which is pretty much the same as taking a supporter of the peace movement and naming them as head of the Department of Defence. I mean, it is astonishing that he did that, but all his rhetoric for coal did not accomplish anything. Two weeks ago, Vista Energy from Texas announced the retirement of four gigawatt of coal power generation by 2018 because of cheap gas. So, in this regard, there is hope that the United States – not because of Trump's policies, but because of the rules of the market – will succeed better than many other places in the world.