Interview Andreas Löschel

August 5th, 2022

Bert Beyers: In Germany we have an energy crisis on the one hand, but on the other hand we are in the midst of an energy turnaround. Is Germany still on course in terms of the energy transition?

Andreas Löschel: In the past, Germany has often failed to meet its own targets. In many areas we have not progressed as quickly as we would have liked. This applies in particular to energy efficiency. But also climate protection. And now the new Federal Government has set itself even more ambitious goals. This discrepancy between wish and reality is particularly visible now. If we had been in a better position in the past, if we had been more energy efficient, saved more energy, protected the climate more and developed more renewables, then we would be in a better position today. But it doesn't help. The main question now is how to deal with the energy crisis. Now we have to look at the short term, how we can get it all together and how we can avoid setting the wrong course and damaging the energy transition in the long term.

Now Germany wants to use more coal-fired power again. And at the same time there are plans to phase out coal by 2030. How does that fit together?

I think in the next few months we have to take a stand on what the coal phase-out in 2030 should look like. From my point of view, it makes a lot of sense to say that we will leave the long-term goals intact, but first try to react to this extraordinary situation in the short

term. To do that, more coal-fired power plants have to be brought into the market. If renewables are expanded as planned in the next few years, then we can also move out of coal quickly. We have seen this. In the UK, the coal phase-out was a matter of a few years because coal became uneconomic. But in Germany it depends on how the alternatives will develop by then and how energy prices develop in this decade. Then we will see whether the coal phase-out is also possible in 2030. But the current energy crisis has certainly made it more difficult.

Would carbon capture and storage or utilisation (CCS/CCU) make sense in this context?

I think a lot of CCS, but less so in the electricity sector in Germany. I think we will need CO_2 capture and storage in various contexts, in the industrial sector for cement production, for example. The electricity sector will have hardly any emissions in the future. After all, the goal is to be CO_2-free in the electricity sector by 2035. That will be renewables. And hopefully there will be good options for security of supply, especially green hydrogen. In other areas, however, CCS is necessary for climate neutrality, and globally it is a very big issue anyway.

Germany wants to obtain 80 percent of its electricity from renewables by 2030. Do you think that's at all realistic?

That is already on the edge of what I can imagine. You can look at how expansions have progressed in recent years, even this year. In the case of wind power, the tenders have often been signed. With photovoltaics, too, it will be difficult to keep up the pace. And now it's all supposed to happen three or four times faster, with all the ancillary conditions. We know that we have massive supply bottlenecks at the moment, which will probably not be resolved so quickly. We need the skilled workers to set it up. We need the space. All this will take time. I think we have to look at this realistically and say: this is a goal that will help us a lot. But whether we can achieve it has yet to be proven.

And then there is the volatility of solar and wind power.

In addition to renewables, we need controllable power generation. That could be gas-fired power plants, probably even on a larger scale than we have today - based on green hydrogen. Which means we also need investments in these technologies. And that is the difficult discussion that was also held within the framework of the Taxonomy Regulation. There will be a great need for financing, beyond the expansion of renewables.

Again, the question: do you think CCS for gas in Germany makes sense?

I actually think CCS is unrealistic. Because there is great resistance to it in Germany. Five years ago, they banned both fracking and the storage and use of CO_2. We have to take note of that. But we will need this technology to achieve the Paris climate goals, according to the IPCC. If we want to use CCS, then we might have to move out of the way, for example to Norway or the Netherlands, to store CO_2 there. And these storage facilities, old gas fields, will then become scarce resources. I would say that electricity generation would then take second place. I would rather use CO_2 from industrial processes.

Energy costs have risen overall. In Germany, too, especially for gas. Could that also have advantages?

Economics Minister Habeck once said that this is cynical. Yes, with the high prices, great economic advantages are now being discovered in energy saving and energy efficiency. Even for investments that were not so clearly economically viable in the past. Because we come from a decade in which energy was quite cheap. And therefore it was not clear why one should spend a lot of money at all to save energy or to use energy more efficiently. From today's perspective, of course, the crisis has opened the eyes of many. Economists had thought that the price increases would be more politically planned, via higher CO_2 prices. Now this increase in energy prices has come unplanned, from outside, because the situation was misjudged in terms of energy policy. That's what's causing the problems.

What does that mean in practice?

The higher prices are slowly reaching households and industry. At the moment we see that it is very difficult. Industry and politics are trying, where possible, to cushion this cost burden, to dampen the market somewhat and to somehow take out such price increases again. But that sends the wrong signal. The signal should really be: energy is expensive, will become even more expensive and will remain expensive, at least in the medium term for the next few years. Investments that may not have paid off in the past are paying off today. This means that the topics of energy transition, renewables and efficiency are now also of strategic importance.

And in the long term?

I believe - and this is one of the lessons that will be learned - that we should not only look inwards, but that we should see this as a global challenge and position ourselves more robustly globally. I believe, for example, that green hydrogen will play a major role in the future. And we have to position ourselves more broadly, diversify more, and weigh political risks differently. I see the discussion about the coal phase-out more as a temporary problem of this decade - at least for us. I also don't see the expansion of the LNG terminals so critically, because that opens up another possibility to deal more sovereignly with our energy purchases. And it is clear that we are a major energy importing country and will remain so in the future. For electricity, the exchange will become more important in the European context, for hydrogen in the European and global context. And we also need more robustness in international relations.

You mentioned green hydrogen. Do you think that the general increase in the price of energy will give this more of a push?

Yes, for sure. So of course we have a big push for fossil projects now. It is simply worthwhile to produce more gas. Coal, oil and gas prices are at all-time highs. There are also a lot of fossil projects that are being launched. But these are not permanent solutions. If an interesting project starts now and it runs for 20 or 30 years, then it is a time dimension in which we had planned to become climate neutral. So it doesn't really fit into the picture, it runs the risk of becoming worthless at some point. That's why I believe that we will see major investments in the field of green hydrogen in the next few years. Interestingly, it has always been thought that we would develop a bridge made of grey or better blue hydrogen. In other words, with a CO_2 footprint that will eventually be quite small, also by working with CCS. But that is difficult at the moment because gas

prices are so high. And it could well be that we will then have to go directly to green hydrogen. But that will make transformation much, much more expensive than we thought. Now it will be a question of how to get the costs down. Especially in areas where the production costs are low. I was on a delegation trip to Australia this year with Research Minister Stark-Watzinger. There is excellent potential there for the expansion of renewables. However, cost reductions are also needed for electrolysers. The costs there are still quite high. In the next few years, we will see cost reductions here due to large-scale projects in electrolysis expansion. I'm thinking, for example, of the large-scale Neom project in Saudi Arabia. And then I still have to organise the rest of the chain, such as transport. That will probably run via ammonia for the time being. And then the hydrogen has to get to the consumers, the companies.

What has the crisis achieved so far?

Perhaps that people are looking more at hydrogen derivatives and also more at the European context. Nevertheless, we must not drop the global component.

You mentioned Australia, is there enough potential for the production of green hydrogen?

Globally, there is definitely enough potential. But also in Europe, especially in the south for solar and in the north for wind. However, for the implementation you need the local acceptance and the financial resources. I always say that we have to take a more European approach to the expansion of renewables. In regions outside Germany, there is a lot of potential that is not being tapped at the moment. But there are obstacles everywhere, even globally. That was one of the things I learned on my trip to Australia, for example. The expansion of renewables there is not yet as far advanced as one would expect given these potentials. The things that still need to be done are huge, even for the Australians. They want to install well over 100 gigawatts in the next few years, but starting from a very low level. There is surprisingly little infrastructure planning for this, it hasn't happened systematically at all so far. It has simply been done ad hoc. That means the resistance is there, even though Australia is so sparsely populated. And of course you have to get the investments right, because they always have to be measured against the alternatives. In Australia, because of the rise in energy prices, they have received a signal that their business model with oil, with gas, with coal, with uranium, will run even longer than was perhaps

thought until recently. So I think the potentials are there, they are very high, but they also have to be harnessed and this must not be imagined too easily.

Rising prices for energy, combined with a strong dollar, can have dramatic effects in developing countries. I'm thinking of Sri Lanka, for example. How do you see that?

I think there will be a big danger that many countries globally will turn to the seemingly cheap coal they have and use, for example Indonesia or China. There will be a great temptation to fall back on domestic raw materials, which, however, are quite problematic from the perspective of global climate protection. If the developing and emerging countries take a step back here, the global climate goals will not be achievable. We actually have to support these countries so that they don't swing back, but rather focus on energy efficiency and the expansion of renewables locally. That is often not being done at the moment. Because the money is not there, because the know-how is not there. We have to think much more internationally. How do we support the efforts of developing and emerging countries? Otherwise, I think it will tip in the other direction.

In our discussion, we want to gain a realistic assessment against the background of the energy crisis and the energy transition. In what time dimensions are you thinking?

I think it is important to distinguish: What will help us in this crisis situation over the next three to four years? What will help us in this decade? And what do we need to initiate now because we will need it afterwards? In the current crisis mode, we are looking at everything that will provide us with energy in the short term, and we are making many exceptions. By 2030, it will be a matter of expanding renewables - a very big challenge. What else do you need besides renewables if you want to phase out fossil fuels? And that's where we have to set the course today. These are the issues of hydrogen and synthetic fuels. I don't think they will make a major contribution in the current decade, but they will be an indispensable part of the energy transition in the next decade.