



Interview Friedbert Pflüger

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Why Carbon Capture?

Friedbert Pflüger: Carbon capture is an absolutely key technology. We need it if we are really serious about combating climate change.

Why?

Because in the coming decades we will live in a world with a rapidly growing population, where more and more people want access to energy, want to grow and strive for prosperity. The world is so hungry for energy that even if we make every effort, we won't be able to do it with solar and wind energy alone. And that is why fossil fuels such as coal, oil and gas will continue to be used, perhaps not in Europe, but certainly in the USA, Russia, China, India, Indonesia, Colombia, Australia and Africa - in other words, almost all over the world. I maintain: no one will simply leave fossil energies in the ground, because they represent wealth in the respective regions. That is why it is a great illusion to believe that we can go preaching through the world and say: you must all build up wind and solar energy now. No, they will use their fossil deposits. And if they do use them, it is better that they do so with capture technology rather than without. That's what the UN Intergovernmental Panel on Climate Change has been saying for 15 years. But people who consider themselves climate protectors have so far successfully prevented this technology in Germany - and have certainly not done the climate any favours.

In Germany, carbon capture is to be used primarily where there is no alternative to the technology. Is that enough?

The German discussion and also the discussion in the EU actually aim at enabling the capture of unavoidable CO₂, for example in the cement industry. Subsequently, the CO₂ is to be transported on ships or in pipelines to storage sites, for example in the North Sea, in order to inject it there - in rock strata deeper than 1000 metres. If we could achieve this now with the Carbon Strategy in Germany, that would be a first step forward. And those who are working on it, for example Wintershall Dea, Evonik Industries in Norway, OGE or Fluxys in Belgium, say in unison: for heaven's sake, take these necessary steps now and don't overlay the discussion with the demand to equip existing power plants with carbon capture technology. Because then the climate protectionists will immediately come back and say: Oh, you only want to prevent the expansion of renewables and prolong fossil fuel business models. I believe that we would be wise to focus on unavoidable CO₂ emissions with a view to the EU.

And beyond that?

When we look ahead to COP28, which will take place in Dubai at the end of November, one of the key issues there will be whether CCS technology should not also be used for coal, oil and gas-fired power plants. I am firmly in favour of this, and those who say "No, we don't want that", I would reproach them: You should ask yourself whether you are really concerned about climate protection or ideology? For we will continue to live with fossil fuels for decades to come, and it is better to capture CO₂ there than to simply let the processes continue as they are. By the way, the hosts in Abu Dhabi see it the same way.

They propose a kind of double strategy. In Germany, first tackle the unavoidable emissions and globally use carbon capture in a comprehensive sense.

I have good contacts, for example in Saudi Arabia, the United Arab Emirates, China, India - and everywhere they say: We are going to the COP with the aim that carbon capture and storage (CCS) and also carbon capture and utilisation (CCU) should be possible for energy production. And that will probably be a line of conflict. Many NGOs, for example, will be against it. But this line will prevail. It is in line with the IPCC.

Let's come back to Germany. Are you in favour of carbon capture also being used here, i.e. transported and injected on German soil, onshore or offshore? So far, that has not been allowed.

In any case, I am in favour of first capturing the CO₂, of transporting it by ship via pipelines. So far, not even that is allowed. And then Norway, Denmark, Iceland, the Netherlands and Great Britain are already offering themselves as storage sites. They even want to earn money with it! In Iceland, they are building a real import port for CO₂. Here, it will be difficult from one day to the next - especially on-shore. There are still too many fears. I would advise against taking this discussion by force now if one wants to promote the issue further. That we should also start developing storage sites in German waters in the medium term? Certainly. Who knows, maybe the discussion will soon turn around here as well and there will be more acceptance.

It is often said that the topic of carbon capture needs to get out of the muddy corner.

The so-called climate activists, who are not interested in a rational discussion, a pro and con, but have prepared the topic like a campaign, have brought it into the mud corner. Carbon dioxide is part of our lives. But it has been demonised. I would even go further: We need CO₂! We can use it to produce synthetic fuels. We can use it in the production of synthetic methane. We can use it in methanol. In the hydrogen world with its derivatives, which we all want to build, we need CO₂ as a raw material. And we will get to the point where we have a worldwide CO₂ system: Where the CO₂ is captured here, transported by ships to the Earth's sunbelt, used there to produce hydrogen or derivatives or synthetic fuels, which are then perhaps sent back with the same tankers. This will create a cycle. The European company Tree Energy Solutions (TES), for example, is working on this.

Now you're thinking pretty far ahead!

These are realistic visions of climate protection that can be reconciled with a growing world population and our desire for prosperity and social security. But to stand up against this and to put ever more ambitious goals on the wall

and then preach: The whole world must now go solar and wind and learn to do without - that will fail. In energy and climate policy, too, the world does not want to be moulded by the German way.

But part of the realism is that carbon capture is not exactly free: between 50 and 150 euros per tonne of CO₂.

The subsidies that we now have for green steel or that we have had for the expansion of renewables also cost a lot of money. In Germany alone, we have put 500 billion into subsidising solar and wind energy. With scaling up, prices will fall for carbon capture. Of course, you have to look at it carefully. But let's make a business case out of it! We have a CO₂ trading system in Europe. The more CO₂ prices rise, the more profitable carbon capture and storage will become. I would set much fewer targets. We have the Paris climate targets and I stand by them completely. But how we achieve them and with which technologies - that should be left to engineers, entrepreneurs and the wishes of consumers. And it should not be determined by politicians today.

Again on the subject of realism. Carbon capture takes place today only on a vanishingly small scale. The thing is at the very beginning.

Unfortunately. If we had listened to Jürgen Großmann (RWE) or Tuomo Hattaka (Vattenfall) in 2008, who wanted to introduce CCS in Germany at that time, we would already be further along. We would have already captured and injected millions of tonnes of CO₂, we would have created an export hit with German technology. Once again, other countries have developed this technology. However, I concede: If we look at the next 20 years, CCS and CCU will not become a silver bullet. We have to do everything! The focus is still on the expansion of renewable energies. Many countries will certainly also rely on the fourth or fifth generation of nuclear energy. Or on nuclear fusion. We will need a variety of technologies if we are to combat climate change. One of the main ones is CCS/ CCU. And once we allow that and get over the regulatory hurdles, I'm sure that there will be tremendous technological progress unleashed here, and we will have a lot of fun with this technology.

What is your personal role and that of the Clean Energy Forum in this?

We founded the Clean Energy Forum (CEF) in July 2023 with an advisory board of trustees that includes distinguished personalities and energy experts: Professor Hüttl, Professor Radermacher, the Chief Executive of the German Renewable Energy Federation Wolfram Axthelm. There is Monika Griefahn, President of the e-Fuel Alliance and Barbara Lempp from EFET Europe. There is Günther Oettinger, the former EU Commissioner, Jorgo Chatzimakakis, the head of Hydrogen Europe, and many other outstanding minds from the energy world. Together with my wife and children, I founded a non-profit limited liability company, the CEF. We want to be a small counterweight to Agora Energiewende, the Climate Neutrality Foundation and others, i.e. the existing think tanks, which are all more or less marching in one direction. We have nothing against them, important work is being done there. But we complement the spectrum of climate protection with a different approach: we don't want to work with bureaucracy, with regulations, with bans, with demands to do without, but with the unleashing of technological and market-based possibilities. The other foundations have millions in funding, much of it from the United States of America. We do almost everything so far on a voluntary basis. We won't be able to outdo them in the foreseeable future. But we feel that the superior role of technology and market-based incentives are underexposed, and we want to strengthen carbon capture. To this end, we will present our second study at the end of October.

What was the subject of the first study?

That was the Inflation Reduction Act (IRA) and the accompanying unleashing of climate technologies in the US. We no longer have any reason to look down on the USA in terms of climate policy. There is much to suggest that they are overtaking us in Europe in terms of both economic and climate policy. Our current study on carbon capture was written by Professors Rademacher, Hüttl and the former BGR President, the geophysicist Professor Kümpel. These are the most renowned experts in Germany on this topic. And we hope that with it we can help to rationalise the debate in Germany and perhaps also give political decision-makers a handhold for the strategy and legislation of the coming months.

Mr Pflüger, you are also the host of the Energy Talks at the Reichstag, now for the 162nd time. What is your motive?

I have two children, they are now 17 and 19 years old. Like all other parents in Germany, I want them to be able to live their lives on a planet worth living on, with nature intact. The subject has occupied me for a very long time. Over thirty years ago, I wrote the book: *A Planet is Saved. A Chance for Humans, Nature, Technology* (Econ 1992). Then as now, I believe that it is a mistake to try to bring the people of the world to contemplation with postulates of renunciation. They all strive for prosperity. They all want to have a car. They all want computers. They all want their children to be better off. So energy growth will be dramatic in the next few years. And that's why we need all energies and have to make all forms of energy as clean as possible. That is my philosophy. And the recipe for success of these 162 energy talks is that we have managed to establish a dialogue on the best way to protect the climate without defamation. There is a broad consensus that we want the Paris climate goals, that we think climate protection is important. But how exactly to do it, what exactly is the best way, must be debated democratically and in a civilised manner. This debate takes place far too little in the country. With us there is a rational, calm, civilised dialogue, by the way, always also with the Greens, always also with the Agora. Again: they are and remain important. Sometimes you have to warn them a bit against hubris, as if they had the absolute truth.

What are the chances that the planet will be saved?

We all feel that we have great difficulty in meeting the two-degree target, let alone the 1.5-degree target set in Paris. If we manage it, it will only be through technological development. There is, for example, an entrepreneur Frank Obrist in Lindau on Lake Constance who has presented a concept on how to achieve negative emissions. There is certainly a lot of future music in this. But if we give such visionaries and engineers a chance, we will succeed. Certainly not with the policy currently favoured by the German government and the EU, where it is presumed that we can decide today what we may or may not do in 15, 20 or 30 years. That will lead us astray.