

NICOLAS PIAU

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Song-Nim and I composed this panel very carefully in order to have the academic view, the government view, and the business view. Now, we have the finance view with Nicolas Piau, and also the energy and climate view, because Nicolas has been, for a long time, working for Engie in France, a huge energy company. Basically, he is an energy man.

However, then he started to set up his own company, TiLT Capital, which is an asset management group supporting start-ups in different phases concerning the energy transition. That is an extremely important and interesting endeavor. Nicolas, we are happy to have you here. The floor is yours.

Nicolas Piau

Thanks a lot, Friedbert, and I am very happy to be here. It is really an honor and it is also quite intimidating because, frankly, after Philippe, Jonathan and Christophe, as you were saying, I am not at all an expert in this field. I am more on the receiving side of all of what you have described as an energy guy. Actually, I am going to try to bring on board what I have just heard during the panel.

I think, for us, what it means when you look at it from the energy perspective – and that is maybe the first message – is I would strongly oppose any views that say that, with the energy transition, the energy trilemma is dead. You may have heard this. The energy trilemma is basically you need to compose three pillars – affordability, sustainability, and security of supply. I think what 2023 has brought is actually that security of supply has become the main focus of that energy trilemma.

I think it bears two challenges. The first one is we should not forget about the other two – affordability and sustainability – and we will come back to that. I think the second implication is that it brings back energy in the field of geopolitics and industry.

Thinking over the course of the last decade, energy has been seen very much as a financial opportunity, for a very simple reason. It was the early stages of renewables development. It was about securing contracts, EPCs, financing, etc. and there were no questions asked. Also, because it was very limited in scope compared to other forms of energy.

I think, today, this is changing radically, and we need to acknowledge that. I think that would be the first message: what we are seeing as energy investors is that, for all the messages that

have been passed by the panel is security of supply is coming back as a major topic in any energy investment.

You opened, Friedbert, saying Russian gas may have been a problem here and there, but eventually that is not the real issue. The real issue is much more the dependency on China on a number of topics and, in general, with those key materials.

Today, when you look at companies in which we invest, this is not a topic. This is not a topic because it is not seen. Today, if you want to obtain an inverter, if you want to obtain a lithium/gallium-based chip or a silicon carbide-based chip, you have no issues. The question is how long will that last?

Of course, all that has been mentioned around enhancing the extraction, enhancing the recycling, etc., having additional resources is something that, as energy investors, we welcome – but I think we should be much more vocal about the need for that. I absolutely agree there will be no energy transition without additional mining, without additional extraction.

However, it also begs the question, of course, of sustainability and, here, let me maybe come back to one element coming from that world. I think I would have one message on this – let us try to not make the same mistakes as we have done over the last decades on oil and gas. We cannot afford to have another Ogoni disaster, or Macondo disaster, with the mining industry for those critical raw materials.

I think, if we have that, and, Jonathan, you said it very clearly, there is probably some image issue, too but, beyond the image, I think there is the fact that, if we have something of the magnitude of what happened in Nigeria with the Ogoni community, or with Macondo with BP, I think it will cast a very strong shadow on the reality of the sustainability of that energy transition.

I do think we need to engage in more cooperation on this front. Actually, I even think that this whole critical material issue could be a way to foster a greater cooperation between consuming countries and extracting countries.

Let us be clear – today, when we are saying, ‘We need to mine more. We need to refine more’, who are the recipients of those materials? It is the rich population of the more developed countries.

How does that locally affect the people who are on the land where you have this extraction and this processing? I think here we need to engage in more cooperation. I think it should translate into profit-sharing. I think we should maybe learn some lessons from some oil countries that have been fairly good at this.

I always used to say to people, ‘Why do we not drill for oil and gas in Switzerland, where there are virtually no taxes?’, and, ‘Why do we drill in Norway, where the tax is 78%?’. Well, because there is oil and gas in Norway. I do not think the Norwegian government or the Norwegian people would tell you that it has affected them in a bad way that the tax is 78% on each barrel that was taken out of the ground.

I think we should have that same kind of reflection on the critical raw material. We need to use that to transfer skills, money, maybe try to create value chains locally, in order to actually build not only some resilience, of course, we need to do it in Europe but we also need to build trusted value chains on the critical raw materials outside of Europe or India or wherever, so that we can multiply those trusted value chains.

I remember, last year, Khaldoon Al Mubarak said that the UAE was focusing on those trust value chains. I think this is one example, one area, where we should be targeting this type of cooperation.

Of course, there is a lot to be said about ESG, etc. However, I absolutely believe that, if we are not sensitive to environmental and social issues in mining, we will have a backlash on the energy transition because people will say, 'It is actually not a clean transition and a just transition'. I think this is critical.

Finally, the last point I would like to make is more as an energy guy, and I will be raising more questions, actually, than providing answers.

There was a very interesting report from the IEA following the increase in commodity prices in 2021/22 and the freight prices. Actually, when you look at this trend, commodity prices plus freight prices led to a 25% increase in CapEx for renewable energy – offshore wind, onshore wind, even solar power, etc.

There is one reason for that. We talked about electric vehicles and, if you take an offshore wind turbine, you have 15 tons per megawatt of critical materials. You have one ton per megawatt for a gas turbine. If you consider that a typical offshore wind turbine today is 15 megawatts, that is 225 tons of critical material.

40% of that is copper. If you have a doubling of the price of copper for an offshore wind turbine, it is just one million more cost for each offshore wind turbine.

Therefore, I think one thing we need to be aware of is that we have traded a short-term, variable, cost-based energy economy – basically, electricity prices and energy prices were determined by the marginal cost of gas, oil and coal, to a certain extent – in for an economy that is going to be increasingly linked to fixed cost price, and that has dramatic changes to the energy market. I am not saying it is bad or good, I am just saying it will have implications.

If you invest in a time where the cycle is very high on commodity, we will be locking for 25 or 30 years higher costs and, hence, it will have an impact on competitiveness.

I am aware that I am not bringing any solutions there, I am just saying we need to be very cautious of all these implications. I think one thing it means is, as an investor, I would say we need to find ways to soften the boom-and-bust cycles that will have repercussions on the CapEx.

I think innovation is critical – and cobalt is a good example. We first had NMC batteries which were 5:3:2 – 50% nickel, 30% manganese and 20% cobalt. Now, we are running rather on 9:0:0, which is 90% nickel, 0.5% manganese and 0.5% cobalt.



Indeed, innovation will help us build some resilience. At the same time, if we innovate and we deprive some of the countries that see that as a way to create sustainable wealth for them, this will also cause a problem. That means that, again, this calls for heightened cooperation to avoid some countries that may want to, today, invest massively in some of those minerals and if there is a massive innovation in 10 years, finding themselves with stranded assets and a link to unjust transition.

Friedbert Pflüger

Thank you. Thank you all for fascinating views from different angles, for your time discipline, which now gives us the possibility to have time for a discussion.