

INGVIL SMINES TYBRING-GJEDDE

Non-Executive Director at Norge Mining, former State Secretary for the Ministry of Petroleum and Energy of Norway

Friedbert Pflüger, Director of the European Cluster for Climate, Energy and Resource Security (EUCERS) at the University of Bonn, Founding Partner of Strategic Minds Company GmbH

I have just heard that we will get Peter later, but I would now like to turn to Ingvil Smines Tybring-Gjedde from Norway. Here we have an incumbent in the sphere of critical raw materials.

Jonathan Cordero, Head of Corporate Development at Eurasian Resources Group

The mission we have ahead of us is so big there is no competition in mining, there is so much work for all of us.

Friedbert Pflüger

It is a huge, established company and here is a wonderful new company from Europe called Norge Mining, which for the second time is a partner in the World Policy Conference. I welcome you wholeheartedly, Ingvil, you have been Norwegian Minister for Petroleum and Energy, as well as Minister of Public Security in your country. Now you are bringing all your experience in government and the oil and gas business to Norge Mining, which has found big deposits in Norway, which is in Europe. Those should now be exploited, and we want to learn more about that very exciting endeavor. The floor is yours.

Ingvil Smines Tybring-Gjedde

Thank you so much. I hope the technology will manage the transmission from Norway to Abu Dhabi. Last year I participated in-person, which from all points of view was a better solution than participating digitally of course. I am mentioning this in particular because December is a very cold month here in Norway and I am freezing sitting here in my home office with electricity prices going through the roof. Why am I emphasizing the climate in Norway for such an audience? Let me take a few steps back. Much of the focus this last year, and rightly so, has been on mitigating the worst effects of energy production on the environment and the transition to low carbon and sustainable alternatives. However, this approach risks overlooking some crucial issues: how to bridge the gap to a sustainable future while simultaneously meeting the ever-increasing demand for energy. Living in Europe, I will give you examples from this continent: these days, we have an energy crisis in Europe. Short-sighted European energy policy made it painful for all of Europe when Putin invaded Ukraine putting energy security back on everybody's lap.

The solution seems obvious, in the short-term coal-fired power plants are reopened and the life of nuclear power plants is extended and in the longer-term, wind, solar plants and battery factories will become even more important. The paradox arises that Europe will go from a fossil to a renewable energy system, with the risk that this new energy system will be much more dependent on China and Russia than the current system. That is because of minerals, a renewable energy system is highly dependent on minerals described by the EU as critical and without which the European economy will come to an abrupt halt. The green shift increases this sort of dependency and, as you have all been talking about, a wind power plant needs nine times more minerals than an equivalent gas-fired powerplant and an electric car needs six times more than a car using fossil fuels. As the panel has already said, these minerals are hardly mined in Europe. Both Russia and China are major exporters and the crisis created by the invasion of Ukraine is well-known. I hope it will not happen, but in the event of a conflict with China, Chinese exports of CRMs will become a powerful weapon. The continent could be plunged into a crisis that turns the current energy crisis into a pale shadow. The struggle for access to minerals is also international, foreign and security policy and it is a conflict the West is not well-prepared for. The West is even more dependent on Russian and Chinese minerals than on Russian and Chinese energy.

As a former Minister of Public Security and Petroleum and Energy, and now the present member of the Norwegian Defense Commission, I am very aware of the challenges I have presented, and that we are going to talk about in this session. I am also aware of the very important natural resources we are blessed to have in Norway, oil and gas, an abundance of hydropower, but we pay for it with our weather conditions. We also have huge resources of different minerals that are defined on the EU list as CRMs, and I am sure Peter will talk a little about those in a bit. Currently, Europe relies on imports for these materials, which brings supply chain vulnerability and geographical risk. As a result, the EU wants to increase European production and prospecting for these minerals, and it should be noted that Europe currently consumes about a quarter of the world's raw materials but only produces about 3%.

As already mentioned, the green energy transition to deliver a carbon neutral economy is critical raw material intensive. The global shift from fossil fuels to renewable energy can only be achieved through mining of metals and minerals that play the key role in green energy production and storage. So far, the company and each of the Board members of Norge Mining, have completed more than 72,000 meters of drilling and, in summary, the exploration rate has been tremendously successful with the discovery and publication of two world-class resources of phosphate, vanadium and titanium making up about 20% to 30% of our entire potential. I would like to underline the approach we have taken to the projects, which is of utmost importance to us, to Europe and the mining industry. We have embraced the highest standards of environmental and other behaviors, aligned with international sustainability programs, ESG and SDG. Compliance and disclosure guidance are central to our strategy of becoming a responsible mining and processing business.

The argument for increasing the production of raw materials in Europe has never been stronger, nor the need more urgent. Phosphate, vanadium and titanium are all on the list of CRM and they have all been found in our licenses in Norway. Phosphate is very much a case in point, I have to mention this because it was not mentioned before, phosphate was added to the list in 2014 and has remained on the list ever since. It is included because of its key role in agriculture,



industry, in the production of fertilizers and for food security. Around 95% of phosphate produced is used in fertilizers and it is absolutely essential to the security of our food supply, but it is also increasingly important in the green energy transition, as mentioned. As for the use of LFP batteries, such as electric vehicles and static energy storage, China is the world's biggest producer of phosphate today, followed by Morocco, the US and Russia. The war in Ukraine has weaponized natural resources, particularly energy but also phosphate. That conflict has also weaponized grain supply, which further threatens food security, which will have effects on a broader scale.

The EU has historically imported most of its phosphate from Russia and the invasion of Ukraine has created an urgent requirement to prevent dependency on Russia. There could not be any better time to develop the phosphate industry in a stable environment in the heart of Europe, in Norway. It will create security of supply in Europe and beyond, thereby contributing to food security and positively reflecting thousands of miles away. I also have to mention that Norway's resources would last 50 years and beyond. The vast resources of phosphate in Norway could underpin the emergency of the European LFP battery industry.

Let me conclude by coming back to me talking about the outside temperature here in Norway. The energy crisis we are now experiencing will be followed by a much more widespread crisis of CRMs. Without our own mining industry, Europe is building its renewable energy system on Chinese and Russian soil, and I think that should worry all Europeans. Thank you so much for having this topic at this conference.

Friedbert Pflüger

Thank you, Ingvil, for your time and we do hope that what you have started with Norge Mining will grow stronger and stronger.