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Welcome words

Vienna, May 25, 2023

Check against delivery!

The international dimension of the energy transition

A high-level expert discussion event on 25 May 2023

Ladies and Gentlemen!

Welcome to today's high-level expert discussion event. I particularly welcome our speakers either already being with us or arriving soon: Professor **Thomas Kienberger** from Montanuniversität Leoben, **Timur Gül** from the International Energy Agency and **Stéphane Hallegatte** from the World Bank. Let me also welcome Director **Thomas Steiner** and prominent guests present among the audience, such as . . . , along with numerous viewers who are connected online.

Our topic is "The international dimension of the energy transition". Replacing fossil fuels and enhancing energy efficiency is central to radically reducing global greenhouse gas emissions in response to climate change. Given the enormous technological and economic challenges involved, we have to ask:

1. What will the international division of labor look like?
2. More precisely: To what extent should European and Austrian clean energy be supplied from abroad?
3. And, finally, how will all this be financed?

At first glance, it may seem unusual that the National Bank is inviting people to discuss this topic. To avoid any misunderstandings, a central bank is of course not in the driving seat of climate policy. Our primary goal is to maintain price stability and we also care about the functionality of the financial market. Nevertheless, our tasks are affected by climate change and climate policy. For instance, the physical effects of climate change, such as extreme weather events, can endanger price stability. Likewise, the transition to a climate-neutral economy can increase the risk of a

financial crises. So, the issue concerns our mandate, and while we hope for the best, we should prepare for the worst.

Hence, I find it worrying that even among technical experts there is no clearcut consensus about the technical prerequisites for the decarbonization, or better: “defossilization” path of the Austrian and European economy, not to mention the global economy. This became also evident at a similar event we had at the beginning of the year with two renown Austrian experts, Professor Georg Brasseur and Stefan Schleicher.

Although the essential causes and effects of climate change are now undisputed: the scientific community is still about to broadly map out the way to net zero emissions of greenhouse gases. At the very least, there should be some sort of agreement on what contribution renewable energy sources such as sun or wind, increased energy efficiency through electrification or building insulation, or storage using batteries or hydrogen should play. To what extent will future energy requirements be covered locally? Or: what is the role of those regions that presumably can provide renewable energies much more cheaply, such as the Sahara or Australia? How can energy be transported safely and efficiently from there? What are the losses from the transformation of renewable energy into hydrogen and its derivatives? How can we finance projects in these countries (as profitably as possible) and at the same time avoid new one-sided dependencies? Can we afford taboos like the Austrian one about nuclear energy, or how much hope can we place in innovations like thorium reactors or nuclear fusion? To what extent can we continue to use fossil infrastructure thanks to e-fuels or biogas? Or do we rely more on radical, disruptive technological change in the sense of Schumpeter's creative destruction? What part will behavioral changes have to play regarding mobility, spatial planning, nutrition or goods consumption?

Politicians need answers to these and similar questions in order to be able to underpin their climate goals with credible strategies. And let me say this clearly in view to Austrian climate policy: ambitious goals alone are not enough. We need realistic transition paths with carefully planned intermediate steps, which at the same time leave enough flexibility for market-based and technology-neutral implementation. There needs to be a clear-cut division of tasks between the various incentive instruments, such as emissions pricing and regulatory policy, at the lowest possible welfare costs. This in turn provides the necessary planning certainty for investors and companies to keep the economy going during its restructuring. Ultimately, this also makes our own job easier in terms of inflation-dampening monetary policy and financial market supervision.

All this is reason enough to seek interdisciplinary dialogue with the aim to learn from each other. Therefore, I am happy to have with us today three proven experts in relevant technological and economic areas of research and policy:

Timur Gül has been head of the energy technology policy division at the International Energy Agency in Paris since 2018, where he analyzes the current state and prospects of clean energy technologies across different energy sectors. Before working for IEA, Mister Gül was a researcher at Paul Scherrer Institute in Switzerland for three years. He holds a PhD from the ETH Zurich as

well as a master's degree in environmental engineering from the Royal Institute of Technology Stockholm.

Stéphane Hallegatte is the Senior Climate Change Advisor of the World Bank Climate Change Group. He joined the World Bank in 2012 after 10 years of academic research. His research interests include the economics of natural disasters and risk management, climate change adaptation, urban policy and economics, climate change mitigation, and green growth. Mr. Hallegatte holds an engineering degree from the Ecole Polytechnique and a PhD in economics from the Ecole des Hautes Etudes en Sciences Sociales, both in Paris.

Thomas Kienberger has been professor and chair of the Institute of Energy Network Technology at the Montanuniversität Leoben since 2014. He is expert for integrated energy systems in public space and in industry. The main aspects of his research and teaching are interdisciplinary, systemic approaches to renewable integration and to increasing overall systemic energy efficiency. He is recognized innovator and networker in the industrial landscape in Austria and beyond.

We are going to start with a presentation of Timur Gül, followed by those of Thomas Kienberger and Stéphane Hallegatte, each of them taking some 20 minutes. Finally, we will have to opportunity of an open discussion with the audience. Bot now to you, Timur, the floor is yours.