

Introductory remarks by John Chadjivassiliadis, Chairman of IENE

Dear Colleagues, Ladies and Gentlemen,

On behalf of IENE I welcome you to the Vienna Energy Transition Forum, organized in partnership with the Energy Center Europe.

Fossil fuels and especially oil and gas, became the main energy sources and the foundation of the global energy system during the 20th century and continue to dominate in the 21st. As tackling climate change becomes more and more critical, the energy sources powering our societies and economies have been undergoing a period of rapid change. Fundamental changes are taking place in the global energy system towards sustainable energy of zero or low CO₂ emissions, which will affect almost all countries.

The energy transformation will be one of the major elements in the 21st century. Renewables have emerged as a technologically feasible and economically attractive choice that progressively increase their capacity to meet the energy needs of many countries. Decarbonization policies are taking place with fundamental changes in the global energy system, entering into an “energy transition” period. Rapidly growing renewables have started to transform the global energy landscape, while the drive towards further electrification and energy efficiency improvement is gaining traction.

The global energy transition to sustainable energy sources will continue to accelerate and this energy transformation driven by renewables could bring changes with significant impact.

Electricity, driven mainly by renewables, is becoming the main energy carrier in Europe and soon globally, with new areas of applications and increasing demand, almost everything becomes electrified, such as the transport, heating/cooling etc.

Natural gas is another energy carrier in the energy sector and further expansion of its use and domination worldwide during the 21st century should be expected. Significant amounts of natural gas are used for power generation to substitute coal towards low CO₂ emissions, in parallel with high penetration of renewables. Moreover, new uses of LNG in transport and shipping is becoming increasingly important.

The high penetration of renewables will increase electrification and stimulate cross-border trading in electricity. Variable renewable sources of electricity, such as wind and solar, require storage and flexible and resilient power systems. Especially, a mature electricity storage technology is a basic strategic sector in the energy transition and the future of the European economy, contributing to industrial policy.

Large interconnections between countries and regions, both for electricity lines and natural gas pipelines can effectively meet the needs for flexibility and market operation, as well as for security of energy supply, without ignoring their geopolitical implications.

A huge amount of investment is needed during the next decades for the development of the future electricity and gas networks with storage for clean energy and more efficient European network and market operation. We are moving to a more interconnected world, and the concept of Supergrid and Global Grid, Gas Hub, is at the beginning, with positive influence in the market and the international cooperation.

The transition will generate considerable benefits and opportunities. It is not so much only a technology challenge, but in parallel a regulatory challenge and market reforms, for a plan and new policies.

The Clean Energy Package of the EU is a key element of the European policy and priority towards a secure, affordable and climate-friendly energy, based on renewables with creation of jobs and growth, and attract investments. *Moreover, it will unlock the true potential of Europe's clean and smooth energy transition, meeting the Paris Agreement goals, with increasingly benefits to the society.*

The energy transition is occurring alongside digitalization of energy with exciting opportunities for clean and affordable energy. However, the growth of digitalization and communication technologies in the energy sector can raise security risks.

Cybersecurity threats to the electric power network have become increasingly serious in recent years and the international cooperation is rendered necessary.

Efforts in technology development may contribute to a more sustainable world and facilitating the energy transition in the future. An important aspect of the power sector based on cheap wind and solar electricity in the future is the transformation of “power to gas” (P2G) and “power to liquids” (P2L), contributing among others, to the inter-seasonal storage.

These technologies lead to a neutral CO2 emissions world and prosperous future, with profound economic and geopolitical consequences. The shift to renewables and increased electrification is crucial to achieve carbon neutrality by 2050

Therefore, the energy sector in the European countries must prepare for the changes ahead and develop strategies to enhance the prospects for a smooth transition, *putting Europe in the lead in terms of rules to accelerate and facilitate the clean energy transition.*

As economic and social development especially in the South-East Europe is expected to accelerate in the coming years, energy production and use will play a crucial role, as the countries in the region will have to adapt and transform their energy systems to meet European energy and climate targets.

The energy transition offers a great challenge for closer cooperation between the SE Europe's countries and specialized companies and experts in the field.

Our efforts at IENE is to analyze and give a comprehensive perspective on the future energy system and how the energy transition should be implemented, which are the most exciting challenges.

We aspire to contribute to a high-level fruitful discussion and positive conclusions on the region's key issues for activities, exchange of information and ideas, and the development of co-operation in exploring the significant challenges which lie ahead.

Thank you for your attention!!