

Geneva, 23 March 2023

**Ladies and Gentlemen, dear Colleagues,**

It is my pleasure to participate in this panel today on hydrogen despite I cannot be present in-person. In this period, it's not easy for me to travel due to the difficulties faced with the war in Ukraine.

It should be mentioned that the war in Ukraine has confirmed the need to ensure global energy security which could be reached by renewable energy sources development.

Furthermore, during the last session of the GERE, we concluded that adopting the necessary policies in order to ensure energy resilience and affordability, as well as environmental sustainability, is one of the most important issues for the ECE region.

In the current conditions, the discussion on exploring sustainable solutions to develop infrastructure and increase generation of energy from renewable sources is of interest to all countries of the ECE region, especially in view of the current global energy crisis.

As the Chair of the Group of Experts on Renewable Energy (GERE), I believe that the discussion on hydrogen cannot be complete without considering the hydrogen produced by renewable energy, the green hydrogen.

When hydrogen is burned the only emission produced is water vapour, it does not emit any pollutants or green houses. It becomes therefore important to promote hydrogen from renewable energy which is also emitting low levels of green-house gases and pollutants.

Green hydrogen produced from renewable energy is to be promoted, developed and commercialized for a fully sustainable energy transition. Nowadays, the most advanced technology option to produce green hydrogen is water electrolysis fuelled by renewable electricity. Other solutions to produce hydrogen based on renewables are possible, but these technologies are not yet commercially viable.

In addition, green hydrogen is not so competitive as the so-called grey or blue hydrogen that can count on the support of consolidated infrastructure and experience of the fossil fuel sector. Green hydrogen should anyhow be included in any national plan which intends to support the growth of hydrogen of any colour.

Moreover, hydrogen represents an excellent vehicle to stimulate the renewable energy market and therefore contribute to substantially increase the share of renewable energy.

I am confident that hydrogen projects will help attract investment in this area. Including in the context of increasing energy security, such projects can be implemented both in Ukraine and in the ECE region.

Hydrogen can represent a very efficient way to reduce the variability of energy generation from renewables. As we all know, renewable energy is not available round the clock and green hydrogen can help to store the energy produced by renewable energy. Hydrogen becomes a valid tool for seasonal storage.

How to enable policies for a future resilient energy system that highly supports and is supported by renewable energy and green hydrogen?

In order to meet the Paris agreement and reduce GHG emissions, it requires governments to adopt policies in support of electrolyzers to make hydrogen. Countries of the UNECE region are also behind in meeting their commitment to reach the Development Agenda by 2030. Much more needs to be done to substantially increase the share of renewable energy.

At global level, the roadmap described in IRENA's 2022 World Energy Transitions Outlook foresees a total installed electrolyser capacity of 5 TW by 2050, up from today's 300 MW. National hydrogen strategies usually feature targets for electrolyser capacity by 2030, with varying degrees of commitment. Target setting can ensure the appropriate parallel development of renewable energy and electrolyser capacity.

We need also policies to support industrial uses of hydrogen, in particular green hydrogen. Industrial users of hydrogen should be among the first recipients of green hydrogen, given the lack of alternative decarbonisation solutions and the potential size of local hydrogen demand.

As you know, the Group of Experts on Renewable Energy (GERE) has been working for years to promote, among others, the adoption of ad hoc policies and tools to substantially increase the uptake of renewable energy. In the same way, we are ready to work with all of you to increase the use of renewable energy to produce hydrogen.

Together with GERE and the secretariat, I look forward to cooperating with all of you on this.

Kostiantyn Gura