Press Release

16 November 2022

Joint statement of the global nuclear industry regarding the critical role of nuclear energy within the current geopolitical context

The current global geopolitical context has underlined more than ever the importance of a resilient, decarbonized and independent energy system. Security of energy supplies and affordable prices for citizens and businesses are pressing matters for decision makers across the world. Reaching the climate objectives established by the Paris Agreement, ensuring a more efficient use of natural resources and investing in energy innovation remain top priorities.

The recent report published by United Nations on the Emissions Gap in 2022 shows that current policies are not enough to reach our Paris Agreement targets. A system-wide transformation is needed to ensure the effective and sustained decrease in emissions.

Within the framework of COP27, **we, the representatives of the international nuclear industry, present this joint statement** in support of the crucial role that nuclear energy must play in reshaping our energy paradigm and policies going forward.In order to improve energy security and reduce dependence on fossil fuels, to ensure a fair and affordable transition to a zero-carbon economy and to safeguard jobs and economic growth**, we urge decision makers to acknowledge and support the need for increased nuclear energy generation** around the world. In preparing for the future, we stress the importance of designing resilient

energy strategies, centered around secure low-carbon energy sources able to support external shocks while preserving the well-being of our citizens and industrial competitiveness. Unity, shared commitments to stop the use of energy as a weapon of war and reaching our climate objectives should be the driving forces behind the reconfiguration of our energy policies.

Nuclear power is a safe, affordable and clean energy source, available 24/7, with an extensive operational experience which has been contributing to the decarbonization of our economies for more than half a century and currently supplies over 10% of global electricity consumed.

Nuclear energy has the lowest lifecycle CO_2 emissions per kWh of all energy sources (6g/kWh) and uranium is abundant and well distributed around the world. The cost of fuel represents only a small fraction of the cost of the electricity generated, so nuclear energy can enable a stable cost of electricity for citizens, public administration, industry, agriculture and all other human activities which depend on electricity. Furthermore, used fuel can be reused and recycled, which is a unique and additional merit of nuclear energy. Nuclear energy is also included in all net-zero scenarios evaluated by the International Panel on Climate Change, as a technology which contributes towards security of supply and decarbonization. Nuclear energy has avoided about 74Gt of CO_2 emissions over the past 50 years, nearly two years' worth of total global energy-related emissions.

Under the current energy crisis and during the global pandemic, **nuclear has proven its ability** to generate electricity reliably and around the clock, ensuring the continuous resilient operation of critical services and maintaining social stability, powering our homes, offices, schools, hospitals and internet providers. Electricity produced from the existing fleet of nuclear power plants is extremely competitive and remains the option with the lowest levelized cost of electricity not only among low carbon sources, but among all energy sources. Nuclear new build projects are also cost competitive and the Small Modular Reactors (SMRs) currently under development will bring the additional benefit of lower upfront costs and shorter construction periods. Furthermore, large reactors, SMRs and Advanced Modular Reactors can provide a wide variety of non-electric applications such as clean hydrogen production, thermal power for district heating, desalination, industrial heat as well as complementing the variable nature of renewable technologies.

As we look towards the future, in a new paradigm of clean and affordable energy for everyone, eradicating energy poverty and ensuring sustainable economic development in all parts of the world, **we need to place nuclear energy at the center of our economic relaunch strategies**. Given its multiple social and economic benefits, nuclear technologies, R&D and education infrastructure fulfill all 17 of the sustainable development goals of the United Nations, offering abundant clean energy with low resource use and a high degree of reliability.

Our global commitment to increase energy production from renewable energy sources will require additional dispatchable low-carbon capacities in order to balance our electricity grids. Global expertise and innovation

in the nuclear field should be fully utilized in securing our current and future energy needs. The **energy transition is not possible without maintaining and expanding the role of nuclear power**.

Considering all of the above, in order to achieve a decarbonized and secure energy future we call for the following:

- **Investments in nuclear new build should be intensified and accelerated** to increase the contribution of nuclear power in energy grids by 2030, resulting in a significant, immediate and long-term impact on CO_2 emission reductions. The different financial frameworks available around the world (both private and public sector) should be refocused to allow a greater coverage of nuclear projects and related applications. The role of nuclear power should be viewed from a strategic stand point, fully acknowledging its contribution to security of energy supply, affordable and stable energy prices and decarbonization, in close cooperation with other low-carbon technologies such as hydro, wind and solar.
- **Nuclear innovation and research into all reactor technologies should be accelerated** for fast deployment at global scale, making full use of the non-electric applications as well, such as clean hydrogen production, industrial heat, district heating, desalination. As our energy needs diversify, future energy ecosystems encompassing different sources should be created to reflect and respond to local specificities, in a cost and resource efficient manner. Nuclear power is a clean baseload source able to support the development of intermittent renewable sources. **Additional support should be provided to nuclear R&D and education** to accelerate the path to market of new nuclear concepts such as Generation IV Reactors , as well as to prepare the next generation of nuclear operators.
- If clean hydrogen is to play a significant role as an energy carrier in the future, it will need to be low-carbon, produced in large quantities at an affordable cost, close to the place of consumption. Nuclear power can secure one of the lowest cost for clean hydrogen (as low as 2 Euro/kg) due to its dispatchable production. **Clean hydrogen strategies around the world should therefore include ALL low-carbon technologies, not just renewables.**
- Nuclear projects require strategic planning and a long-term vision. Good cooperation between policymakers, the finance community, industry and other stakeholders is necessary to ensure that the benefits of nuclear power are maximized at every step of the supply chain. **The environmental, social and economic benefits of nuclear power should be fully acknowledged** by decision makers when designing the energy strategies of the future.

The above-mentioned points represent in our view of a sustainable and resilient energy strategy for the future. We stand ready to work with policymakers, the finance community and all relevant stakeholders in order to implement our vision and further develop our common objectives of a clean energy transition, security of supply and affordable energy for everyone.

Happening today at 15:00 EGT - Official UNFCC Side Bar event @ COP27 - Meeting the energy challenge: nuclear's role in a sustainable and secure low-carbon future