ENEF Secretariat's Conclusions

Consistently with its general aim, the Forum provided a great opportunity for open discussions about the future of nuclear energy in the carbon-free European power system and about the opportunities and challenges for the ecosystem of the entire nuclear sector.

The chosen format of the 'World café' sessions allowed the participants to express their thoughts and facilitated lively and inspiring debates between attendees with diverging views. The Forum again demonstrated the feasibility of and the need for constructive, respectful and fruitful discussions on the opportunities and risks of nuclear energy. In both morning and afternoon World Café sessions, the participants could choose and attend two out of the four topics on which they had the opportunity to exchange ideas and views in break-out groups.

The Forum was well-attended and drew a diverse range of participants (with about 200 participants from 19 EU Member States and two non-EU countries). At the same time, it has to be recognised and regretted that several non-governmental organizations, among which some most critical towards nuclear energy, were absent. These represent an important segment of the civil society whose voice should be heard in a democratic and balanced public debate to which the Forum aspires.

In more detail, the Forum discussed the two main topics below, and the ENEF Secretariat has noted the following points summarizing the views expressed during the panel sessions:

1. Carbon-free European power system: integration costs and options for nuclear and renewables

The Forum:

- Acknowledged that the public acceptance is crucial for nuclear energy. To achieve this objective, an appropriate communication strategy (based on transparency) needs to be established. The information on the technological feasibility (for instance of the safe disposal of the radioactive waste) is also essential.
- Acknowledged that the views are diverging concerning the benefits and risks of nuclear energy, and its transitional or long-term role in the future low carbon power system and a sustainable society.
- Emphasised that public acceptance is needed for the consensus, which would provide strong arguments for the policy makers and their decisions.
- Welcomed the Commission's intention for the revision of the electricity market design, highlighted the necessity of the structural changes to incentivise new low carbon generation capacities and to reduce the price risk (volatility) in the power system, and recognised that the market design is a tool to reach the policy objectives (climate goals).
- Highlighted the importance of the technological neutrality and pragmatic decision making, based on scientific facts.
- Emphasised the importance of security of supply, the diversification and simultaneously avoiding of

new dependences.

- Recognised the relevance of new technologies (for instance SMRs – Small Modular Reactors and Generation-IV), however underlined the potential risk of unjustified (or too high) expectations, which can undermine the credibility of the nuclear sector.
- Acknowledged the advantages of the sector coupling and cogeneration opportunities, and the future role of the SMRs in the integrated (hybrid) power system.
- Highlighted the necessity of the optimisation of licensing processes at national regulators' level, especially for new emerging technologies (e.g. SMRs) and called the nuclear industry to take steps to deliver the demonstrators and prototypes, and then launch the serial production for keeping the technological leadership in this field.
- Emphasised the importance of the reliability of the nuclear construction projects and urged the industrial actors to improve their capabilities for delivering on time and on budget, by the beginning of the next decade, without compromising on nuclear safety.
- Highlighted the need to implement, without delay, long-term sustainable solutions for high-level radioactive waste, and called on Member States to step up the efforts in this field.
- Reiterated the importance of the strategic (long term) political vision, which would bring stability for investments in low carbon generation capacities. These relevant political decisions should not be postponed.

2. The ecosystem of the nuclear sector: investments and strategies for decarbonisation and health

The Forum:

- Acknowledged that the current energy market and geopolitical challenges also bring opportunities for the nuclear sector. The resilience of the nuclear energy has been proven; nuclear energy is generally regarded as a dispatchable, stable and secure low carbon electricity source with system integration capabilities. However, not to lose the momentum and to address these challenges it also requires prompt decisions and actions.
- Recognised that the non-power applications (especially the medical radioisotopes) play an important role in the public acceptance of nuclear energy. The security of supply, the diversification and the reduced dependency on third-country suppliers is also essential for this segment.
- Emphasised that the nuclear and non-nuclear (i.e. cyclotron) way of radioisotope production are complementary to each other and both are relevant to provide the necessary supply to reach our health objectives (i.e. SAMIRA plan).
- Highlighted that education is essential to maintain the necessary expertise in the field, and this expertise will play an important role in the appropriate communication to the public, which is a precondition to public acceptance.
- Pointed out that the motivation of the young generation is mainly driven by the long-term strategic decision of the policy makers: a clear and stable perspective for nuclear energy in the coming decades would attract the most people from the young generation. In addition, the available and strong domestic industry would enhance the knowledge management and transfers between the generations.
- Underlined that the talent management is fundamental for the ecosystem, without the sufficient and competent manpower the European nuclear industry will lose its intellectual capacity and the potential to grow, renew and innovate.
- Emphasised that the new reactor technologies (i.e. Generation IV) should bring better solutions for the nuclear challenges (for instance increased safety, less high-level waste, closed fuel cycle etc.), which would also enhance public acceptance of this technology.

- Recognised that research and development (R&D) also plays an important role in the ecosystem and is essential to keep the European leadership in this field.
- Highlighted that the nuclear ecosystem requires significant investments as soon as possible. The availability of the necessary public and private funds would require a stable political environment and the appropriate legislative framework in Member States.
- Underlined that the planned electricity market reform offers an opportunity to the nuclear sector to find a new purpose and encourages further discussions between all parties to define the scope of this new purpose. This new purpose will help to make nuclear energy effectively utilized in countries wishing to use it.
- Recognised the importance of stakeholder engagement and in particular, the need to involve local communities at an early stage, in the decision-making processes related to hosting new nuclear developments.