

## Reaction from SNETP to the leaked draft CDA

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*About us: SNETP is a European technology and innovation platform (ETIP), founded in 2007 as a stakeholder forum recognized by the European Commission to act as a key actor in driving innovation, knowledge transfer and European competitiveness in the nuclear field. Its main role is to develop research and innovation agendas and roadmaps for action at EU and national level to be supported by both private and public funding.*

- SNETP welcomes of the upcoming decision of the European Commission (EC) to include nuclear technology within the sustainable finance taxonomy, in accordance with article 10(2) of Regulation 2020/852. While an inclusion under article 10(1), as proposed by the scientific assessment conducted by the EC, would have offered more visibility to long-term investments, consistent with the large nuclear contribution to low-carbon electricity generation in the EU, the Complementary Delegated Act (CDA) will help enabling nuclear generation to pursue and develop this contribution in the short, medium and long term.
- SNETP considers as positive the references made to the JRC report conclusions in the CDA, in particular the fact that *'nuclear energy can make a substantial contribution to the climate change mitigation objective and meanwhile does not do significant harm to the other four environmental objectives of the Taxonomy Regulation provided that it meets the proposed technical screening criteria'*.
- Moreover, SNETP welcomes the inclusion of Section 4.26 in Annexes I and II. The activity 4.26 *'Pre-commercial stages of advanced technologies with minimal waste from the fuel cycle'* refers to the NACE code M72 and M72.1, i.e. *'Research and experimental development on natural sciences engineering'*.
- Research, development and demonstration activities related to waste minimization from the fuel cycle is an objective clearly pursued by SNETP. It is mentioned in its 2021 Strategic Research and Innovation Agenda (SRIA), and through its dedicated pillar, the European Sustainable Nuclear Industrial Initiative (ESNII).

Despite these positive aspects, the draft criteria would deserve further clarifications and could be more inclusive, especially regarding the R&D activities:

- Nuclear technology is recognized as a key European asset to reach Net Zero by 2050 through the generation of electricity and in the future also energy products such as heat and hydrogen. SNETP would like to stress the fact that the nuclear sector needs high and continuous involvement of EU-Member States together with EC services and industry both on state-of-the-art experimental and demonstration facilities as well as on highly skilled competences and on a functioning and economically operating supply chain. This involvement needs to be **continuous** from short, to medium and long term, i.e. from existing NPP to new NPP and advanced technologies with minimum waste.
- The deadline of 2045 set in the CDA for encouraging new reactors with closed fuel cycle or fuel self-breeding thus limiting construction of new plants without those technical characteristics is excessively stringent for commercial NPP. Today, the most pressing objective of EU energy policy is to reach Net Zero by 2050. In addition, the CDA stipulates that nuclear wastes to be safely managed in safe repository facilities already at this same horizon. Setting such stringent time frames for decarbonization and waste management together is creating the risk of jeopardizing

the Net Zero Goal while not enhancing waste aspects. SNETP suggests not to eliminate any alternative waste management technologies too early, but to favour progressive introduction of new reactors with closed fuel cycles. In such a closed fuel cycle strategy, partitioning and transmutation can be envisaged to effectively deal with the already existing spent fuel from current and Generation III NPP's.

- In the draft CDA, research and innovation activities in the nuclear sector only refer to '*advanced technologies*' also known as Generation IV. We recommend widening this scope to include current best available technologies to be implemented already in Generation III reactors. To ensure continuous safety improvements for these reactors, nuclear research, development and qualification need to be pursued and the required infrastructure be maintained. These activities are covered by the 2021-2025 Euratom Research and Training Programme Regulation (2021/765) which details activities eligible for R&D projects, including '*reactor systems [...] in use in the Community*'. Furthermore, clarity could be improved regarding the status of pre-commercial stages for Small Modular Reactors, as most technologies under development are currently based on either Generation III or Generation IV.
- The draft CDA requires upgraded or new NPP to apply for accident tolerant fuel. A requirement for accident tolerant fuel may result in confusion as it has no precise definition, and many different approaches exist to improve the resistance of the fuel cladding to rupture (from chromium-coated cladding to ceramics). Their technical development and safety assessment is at various stages. In addition, the main safety criterion for the 1<sup>st</sup> safety barrier is to maintain leak-tightness during operation, not the use of a specific technology. **Consequently, SNETP recommends the criterion about the use of ATF to be removed.**
- While non-power applications of ionizing radiation have already been included as a new objective of the 2021-2025 Euratom Research and Training Programme, these activities could also be covered by the CDA as they would have a sustainable impact.
- *Specific attention should be given to all nuclear fuel cycle activities required for nuclear energy (front-end and back-end technologies).* **SNETP considers that these activities should be included.**
- SNETP takes good note of the call made by the European Commission to encourage the development and the '*use of new reactors with closed fuel cycle or fuel self-breeding*'. While the EC recognizes those '*reactors are not yet commercially viable*', the limited 2021-2025 Euratom R&D budget for direct and indirect actions is not sufficient to achieve this ambitious goal in a short period.
- The draft CDA grants the European Commission new extensive powers over a project's taxonomy compliance. SNETP considers the processes and responsibilities currently in place at Commission level and across the Member States as appropriate, including the role of the national regulators.