

Position Paper on European Innovation Council

April 2016

This document provides the position of SNETP, the European Sustainable Nuclear Energy Technology Platform, in answer of the public consultation organised by the European Commission in relation to the creation of a future European Innovation Council.

Nuclear fission is an integral part of the EU's Strategic Energy Technology Plan (SET-Plan), the Union's key instrument to enable the development of its low-carbon future.

Support to fission research and innovation currently exists at some level within EU instruments (Euratom H2020, EIT, ESIF...). However, these do not always reflect the specific needs of innovators. Indeed, as many other sectors, nuclear fission sees the emergence of actors delivering both technological and non-technological innovation; these innovators may require instruments which do not exist at this stage.

SNETP invites the European Commission to ensure that nuclear fission is included in the technological scope of the future European Innovation Council.

SNETP is one of the EU's official European Technology & Innovation Platforms established to implement the SET-Plan. SNETP and its pillars gather more than 120 European stakeholders involved in the research and innovation, deployment and operation of nuclear fission reactors and fuel cycle facilities: industry, research centres, universities, technical safety organisations, small and medium enterprises, service providers, non-governmental organisations. Despite industrial competition, SNETP has achieved efficient collaboration between its stakeholders. It has developed a common vision on the future contribution of nuclear fission energy in Europe, with the publication of a *Vision Report*, a *Strategic Research & Innovation Agenda* and a *Deployment Strategy*.

Background

- Nuclear energy

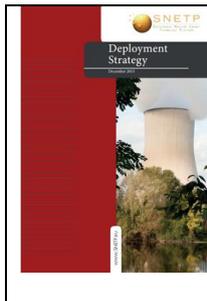
For sustainable prosperity, an affordable and secure energy supply with minimized environmental impact is a primary need, for Europe and beyond. Currently the major share of energy needs is covered by fossil fuel resources. With a growing world population and energy consumption per capita, fossil resources are becoming scarce, while global ecological impact from greenhouse gas emissions is increasing day by day. Increased geopolitical tensions, negative economic impact due to energy price volatility, and maintained imbalance in world population prosperity can be connected to this. It will be hard to change both the luxury of access to cheap energy, and the convenient way fossil fuels have provided it. The right answer is to replace the large share of energy generation by fossil fuels by a balanced mix of different low-carbon energy sources, whilst reducing energy usage as much as is reasonably achievable. The COP21 Paris Agreement to contain temperature rising, and Europe’s ambitious decarbonisation targets will lead to a considerable increase in low-carbon electricity consumption. Therefore looking to massive electricity production by non-emitting sources like nuclear energy is a must.

Nuclear energy has been a reliable energy source for decades, and provides a very significant share of current electricity supply. We believe this share should be maintained in Europe, as a responsible contribution to the EU's low-carbon energy mix. This is achieved by ensuring safe and reliable operation of the current (Generation II) fleet, supported by long term operation, maintenance programmes, and by pursuing nuclear the development of new build projects of Generation III nuclear plants. Furthermore, significant improvements in terms of resources, efficiency and waste production will be reached with the future deployment of Generation IV nuclear systems, which relies on fast neutron technology with a closed fuel cycle. Nuclear fission technology can also deliver cogeneration of heat and power, in particular for industrial purposes where the heat market is dominated by fossil fuels with no alternative from renewables, thus appearing as a game-changer in reducing the carbon footprint of energy-intensive industries.

- Reference documents

The vision and objectives of SNETP are detailed in a number of strategic documents, all publicly available online:

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|  | <p>SNETP Strategic Research & Innovation Agenda 2013 (download here)</p> <p>Updated from SNETP’s initial SRA 2009, the SRIA 2013 addresses the short-, mid- and long-term challenges with respect to fission technologies, in line with the SET-Plans’ objectives and long-term vision. The R&I objectives are structured along SNETP’s technology pillars (NUGENIA, ESNII, NC2I) as well as cross-cutting topics.</p> |
| | <p>SNETP’s Deployment Strategy 2015 (download here)</p> <p>The Deployment Strategy complements the SRIA, and aims to prioritise the SNETP programme over the coming decades to make it fully aligned with the general context of electricity generation in Europe, which includes different energy sources, different national energy policies and societal</p> |



challenges. Planning assumptions for the nuclear energy systems define the technical milestones to be reached.

The priorities set out in the above documents are also aligned with the EC's **SET-Plan Integrated Roadmap**, specifically its Heading 5 on *“Supporting Safe Operation of Nuclear Systems and Development of Sustainable Solutions for the Management of Radioactive Waste”*.

Contact

SNETP is happy to provide any clarification or additional information on the above input paper.

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