

## Press release

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# ORIENT NM: Vision for the Future of Nuclear Materials

The EU-funded ORIENT NM project will explore the possibility and assess the added value of establishing a Co-Funded European Partnership (CEP) on nuclear materials

**Brussels – The ORIENT NM project (Organization of the European Research Community on Nuclear Materials) has been launched with the objective of exploring the possibility of establishing a Co-Funded European Partnership (CEP) on nuclear materials. Coordinated by the Spanish research centre CIEMAT, the project consortium includes partners from Belgium (EERA; SNETP; SCK CEN), Czech Republic (CVR), Finland (VTT), France (CEA; EDF), Germany (KIT), Italy (ENEA), Netherlands (NRG), Poland (NCBJ), Romania (RATEN) and Sweden (KTH), encompassing academia, research organisations, and industry. Pivotal to the project is the presence in the consortium of two major Associations active in the low-carbon energy and nuclear energy fields, namely EERA ([www.eera-set.eu](http://www.eera-set.eu)) and SNETP ([www.snetp.eu](http://www.snetp.eu)).**

The transition towards a climate-neutral society relies on a secure and sustainable energy supply. In this framework, nuclear energy has a key role to play, being the second largest source of low-carbon electricity in the world and in Europe, guaranteeing stable and continuous supply at comparably low cost. Many are the benefits of nuclear energy, from the existence of plentiful resources and their ease of stockpiling to its economic security, reliability, and predictability.

Nuclear materials represent a key element for the safety, efficiency, economy, and sustainability of nuclear energy. With the increased greenhouse-gas emissions reduction target set at 55% for 2030 and the long-term goal of the EU to become the first climate-neutral continent by 2050, governments across Europe are looking for ways to increase supply diversity and reliability without compromising the emissions reduction target. Thus, funding research on nuclear materials and encouraging cooperation between countries on this topic is of pivotal importance not only towards fully sustainable nuclear energy, but also for other energy technologies, thereby opening the way to cross-sectorial collaboration.

ORIENT NM will therefore explore the possibility of establishing a Co-Funded European Partnership (CEP) on nuclear materials, pursuing the following objectives:

- a) Produce a Strategic Research Agenda (SRA) until 2040 for materials of all nuclear reactor generations, from current to future ones**

ORIENT NM will elaborate a vision paper merging bottom-up and top-down consensus at the European level. This will be possible through the involvement of two major Associations that are active in the low-

carbon energy and nuclear energy fields, namely EERA and SNETP. Guided by this vision, and with the support of a Technical Advisory Group (TAG) composed by experts from within and without the project consortium, the SRA will be written to address a wide spectrum of needs, accounting for Member States national goals and industrial perspectives, while explicitly considering aspects such as materials supply chain, standardization and research infrastructures. The SRA will provide a roadmap spanning until 2040, although more detailed for the first 5 years.

**b) Elaborate an efficient governance, legal structure, and implementation scheme for the European Partnership**

ORIENT NM will develop an effective governance and legal structure for the CEP on nuclear materials, which will be observant of decision-making processes, intellectual property issues and promotion of innovation. The project will also define an implementation scheme for such partnership. In doing so, a special attention will be put on quality assurance, SRA updating and knowledge and data management.

**c) Establish interaction with all nuclear materials stakeholders**

ORIENT NM will identify suitable ways of interacting with other bodies and initiatives with interest in the nuclear energy field, in order to establish cooperation, collaboration and, in particular, to address the issue of a coordinated use of nuclear materials research infrastructures. These stakeholders include international organizations, standardization bodies, technical safety organizations, fusion and non-nuclear energy communities and other associations active in the energy and nuclear energy field.

All this will be done in close dialogue with Member States and the European Commission, as well as all other stakeholders, in order to meet their requirements and expectations from a CEP on nuclear materials and raise the interest of identified research owners and research managers, by demonstrating the added value of such CEP.

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## About ORIENT NM

ORIENT NM (Organization of the European Research Community on Nuclear Materials) project is a Co-ordination and Support Action funded by the Euratom research and training programme with EUR 1 099 588.75 from 10/2020 to 03/2023. It is run by The Center for Energy, Environmental and Technological Research (CIEMAT), The European Energy Research Alliance (EERA), The Sustainable Nuclear Energy Technology Platform (SNETP), Centre for Nuclear Energy Studies (SCK CEN), Technical Research Centre of Finland (VTT), The Alternative Energies and Atomic Energy Commission (CEA), Electricity of France (EDF), Karlsruhe Institute of Technology (KIT), Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), Nuclear Research and Consultancy Group (NRG), Polish National Centre for Nuclear Research (NCBJ), The Technologies for Nuclear Energy State Owned Company (RATEN), and Royal Institute of Technology (KTH).



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## About the European Energy Research Alliance (EERA)

The European Energy Research Alliance (EERA) is an association of European public research centres and universities active in low-carbon energy research. EERA pursues the mission of catalysing European energy research for a climate-neutral society by 2050. Bringing together more than 250 organisations from 30 countries, EERA is Europe's largest energy research community. EERA coordinates its research activities through 18 Joint Programmes and is a key player in the European Union's Strategic Energy Technology (SET) Plan. For further information, see [www.eera-set.eu](http://www.eera-set.eu).

## About the Sustainable Nuclear Energy Technology Platform (SNETP)

The Sustainable Nuclear Energy Technology Platform (SNETP) is a research, development and innovation platform that supports and promotes safe, reliable, and efficient operation of the civil nuclear systems by facilitating the cooperation among its members. It is recognised as a European Technology and Innovation Platform (ETIP) by the European Commission. The international membership base of the platform includes industrial actors, research and development organisations, academia, technical and safety organisations, SMEs as well as non-governmental bodies. For further information, see [www.snetp.eu](http://www.snetp.eu).