



# Euratom Research and Training - Update



Directorate-General for Research and Innovation

*Roger Garbil, EC DG RTD C.4, 26 November 2025*

# Formation



- Collège et lycée à Saint-Etienne
- Université Jean Monnet à Saint-Etienne
- Ingénieur Physicien

[linkedin.com/in/rogergarbil](https://www.linkedin.com/in/rogergarbil)



European Commission  
19 yrs 7 mos

- **Head of Euratom Research Fission Sector**  
Full-time  
Feb 2020 - Present · 3 yrs  
EU Commission, Brussels Capital Region, Belgium
- **Research Scientific & Technical Project Officer - Euratom Fission**  
Jul 2009 - Present · 13 yrs 7 mos
- **Acting Head of Unit**  
Apr 2012 - Apr 2013 · 1 yr 1 mo  
Brussels Area, Belgium  
DG Research and Innovation
- **Nuclear Decommissioning Engineering and Maintenance Group Leader, European Commission**  
Jul 2003 - Jul 2009 · 6 yrs 1 mo  
Nuclear Decommissioning Engineering and Maintenance Group Leader, European Commission, Scientific/Technical Project Officer, JRC Ispra (Italy),



Physicist, CEA Tore Supra, the largest Super-Conducting Tokamak fusion experiment, Cadarache  
CEA Commissariat à l'Energie Atomique  
Oct 1999 - Jul 2003 · 3 yrs 10 mos

Physicist, CEA Tore Supra, the largest Super-Conducting Tokamak fusion experiment in the world, Cadarache (France),



Physicist, JET Joint Undertaking, the largest Tokamak fusion experiment in the world, Abingdon (UK)  
JET Joint Undertaking (Joint European Torus)  
Nov 1995 - Oct 1999 · 4 yrs

Physicist, JET Joint Undertaking, the largest Tokamak fusion experiment in the world, Abingdon (United Kingdom)



*1. EU/Euratom Research & Training Ecosystem, and Spain*

*2. FISA-EURADWASTE 2025 and SNETP Forum, Key Messages & Outcomes, and Youth Vision Statement*

*3. Year 2022, a turning point for a nuclear revival, and a new World (Dis)Order emerges*

- Taxonomy Delegated Act, Green Deal and Financing, EU Energy and Industrial Policies Looking forward, Competitiveness Compass, PINC 2025, FP10 Horizon Europe, next Framework Programme for R&I

*4. European Industrial Alliance on SMRs*

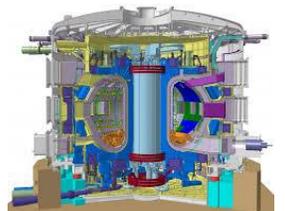
# EU/Euratom R&T Ecosystem

- Euratom experience with FP is a **consistent success in pursuing excellence** in nuclear science research and technology
- **Close collaboration between EC, MSs, OECD/NEA and IAEA, GIF, WNA, International Frameworks agreements**
- **Stakeholders structured dialogue** on R&D policy, safety improvements, holistic approach and early involvement in decision making
- **Industry driven ETPs, Fora** are being capitalised



# EU/Euratom Challenges, Opportunities, Impacts

- Safe and harmonised management of radioactive waste
- Enhanced safety of design and operation of existing and future reactors
- Radiation Protection, lift uncertainty about health risks after low radiation dose due to industrial and medical applications
- Fusion research
- Ensure transfer of knowledge to future generation in the field
- Integration of European research programming and implementation
- Challenges need to be addressed worldwide



ToGEThe®  
SINCE 1957

Euratom Treaty, EU Directives, E&T is a safety requirement

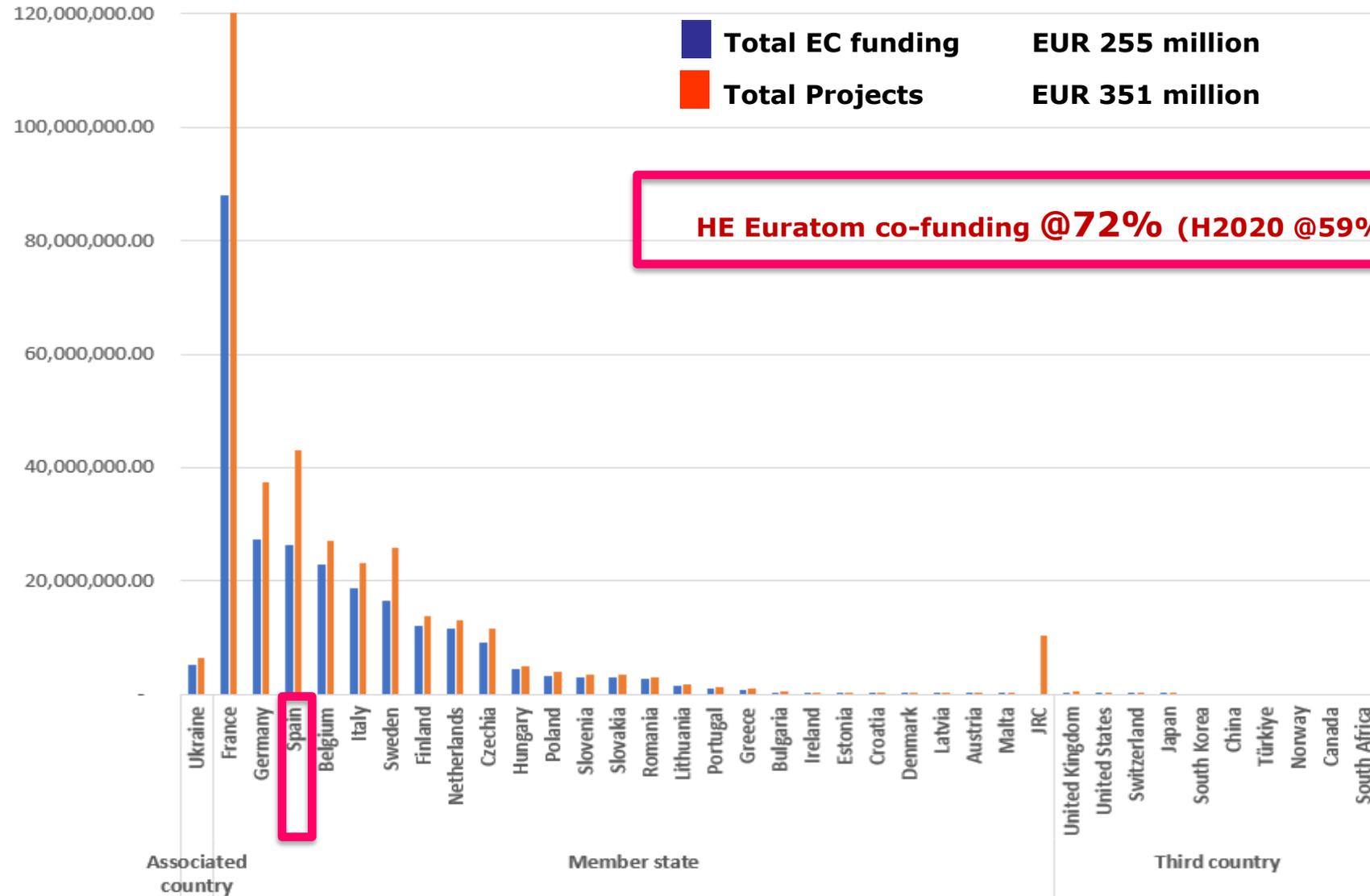
Euratom Treaty (1957), Community research and training programme

EU Nuclear Installations Safety Directive (2009, 2014, art.7), EU Nuclear Waste Directive (2011, art.8), EU Basic Safety Standards Directive (2013, chap.4), IAEA Convention on Nuclear Safety (1994, art.11.2)

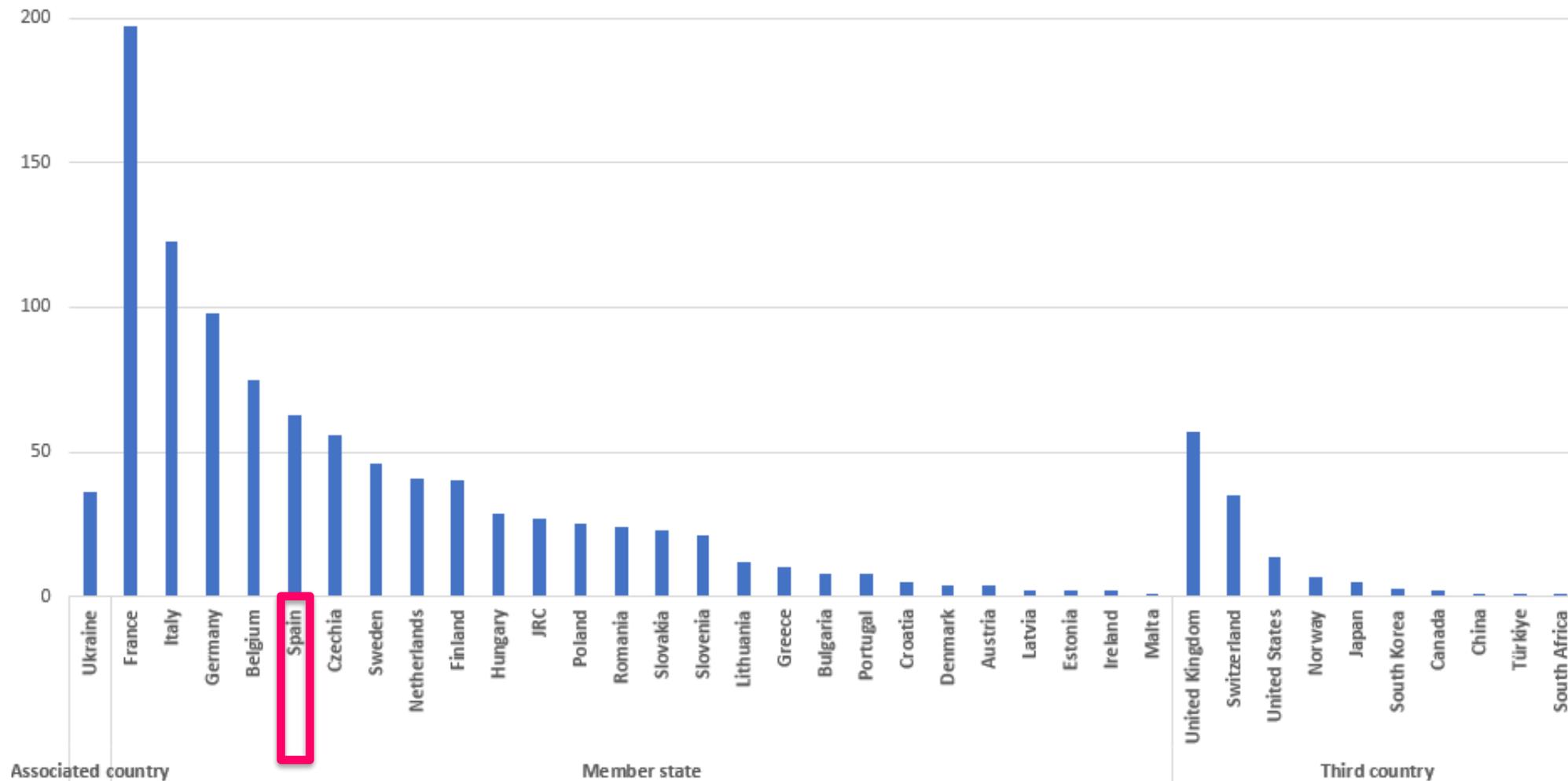
- Effective implementation of EU Research Area ERA in the field of nuclear fission, fusion, and exploiting the full potential of institutes, universities, industries and other organisations in these countries as regards their infrastructures, human resources and overall competences.



# EURATOM Fission HE (2021-25)



# EURATOM Fission HE (2021-25) Participants per countries



# HORIZON EUROPE ~ EUR 90 billion (7 years)

# EURATOM

## SPECIFIC PROGRAMME: EUROPEAN DEFENCE FUND

*Exclusive focus on defence research & development*

Research actions

Development actions

## SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT\*

*Exclusive focus on civil applications*



**Pillar I  
EXCELLENT SCIENCE**

European Research Council

Marie Skłodowska-Curie

Research Infrastructures



**Pillar II  
GLOBAL CHALLENGES &  
EUROPEAN INDUSTRIAL  
COMPETITIVENESS**

Clusters

- Health
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- Digital, Industry & Space
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment

Joint Research Centre



**Pillar III  
INNOVATIVE EUROPE**

European Innovation Council

European Innovation Ecosystems

European Institute of Innovation & Technology\*

### WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation & spreading excellence

Reforming & Enhancing the European R&I system

EUR 1.98 billion (7 years)

**5 years  
+ 2026-27  
Fusion**

**EUR 580 Mi (5y)  
+ 252 Mi (2y)**

**Fission**

**EUR 260 Mi (5y)  
+ 115 Mi (2y)**

**Joint  
Research  
Centre**

**EUR 530 Mi (5y)  
+ 230 Mi (2y)**

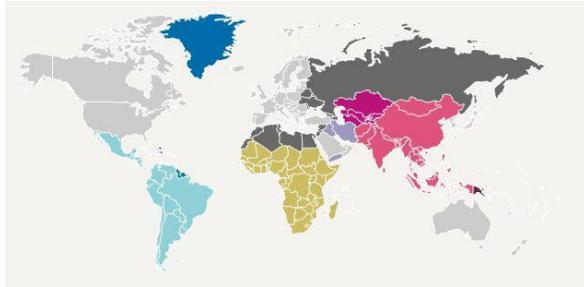
**ITER** (a dedicated EC Regulation, 7 years)

**5.6 EUR billion**

[https://research-and-innovation.ec.europa.eu/index\\_en](https://research-and-innovation.ec.europa.eu/index_en) and Euratom [https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/euratom-research-and-training-programme\\_en](https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/euratom-research-and-training-programme_en)

→ Council Regulation (Euratom) 2025/1304 of 23 June 2025 <https://eur-lex.europa.eu/eli/reg/2025/1304/oj/eng>

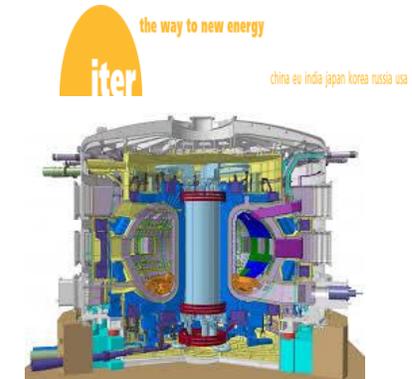
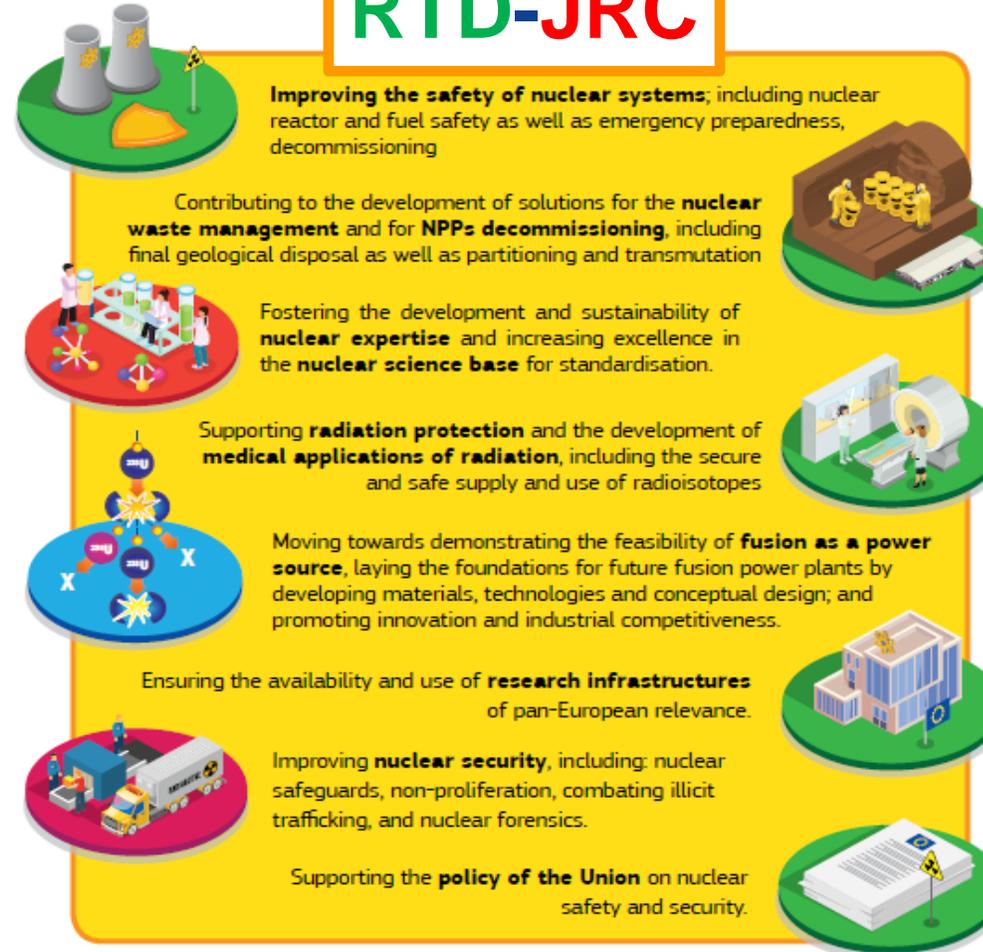
# 2021-27 Overview of unifying activities EC RTD-JRC-ENER-INTPA



Complementing EU Nuclear Safety and Decommissioning (LT, BG, SK) implemented by DG **INTPA** and **New JRC** Decommissioning Programme

Safeguards & security – specific to **JRC**

## RTD-JRC



Fusion – specific to **RTD** (EUROfusion) and **ENER** (F4E Joint Undertaking for the construction of ITER)

**EU Council regulation Horizon Europe** <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0695&qid=1630764388794>  
**Euratom Research and Training** <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.LI.2021.167.01.0081.01.ENG>  
**ITER and F4E** <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021D0281&qid=1630764683246>  
**... Complemented by EI-INSC** <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0948&from=EN>  
**Decom NADP LT** <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0101&qid=1630767059180>  
**Decom NADP SK, BG, and Decom JRC** <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0100&qid=1630767174312>  
**And CBRNE Risk Mitigation Centres of Excellence** [https://europa.eu/cbrn-risk-mitigation/index\\_en](https://europa.eu/cbrn-risk-mitigation/index_en)

# Euratom Fission Work Programmes

For 2026-27, top-ups  
and more ... E&T, INFRA  
European Partnerships

~ 20%

**Waste Management and Geological disposal**



~ 40%

**Reactor systems**

- Safety of existing nuclear installation
- Advanced and innovative nuclear systems for increased safety
- Partitioning, Transmutation and closed fuel cycle
- Cross-cutting aspects (e.g. fuels, materials, simulation, nuclear data)
- Other applications (e.g. cogeneration, support to Research Reactors, Decommissioning)



~ 20%

**Radiation protection  
Non-power applications**

**Grand Total:**

**Euratom Fission RTD ~ 50 Mi€ / Year**

**Euratom Fission JRC ~ 50 Mi€ / Year**

**Total ~ 10 % EU Public&Private Fission R&D**

~ 20%

**Research infrastructures  
Training and mobility  
Cross-cutting INCO**

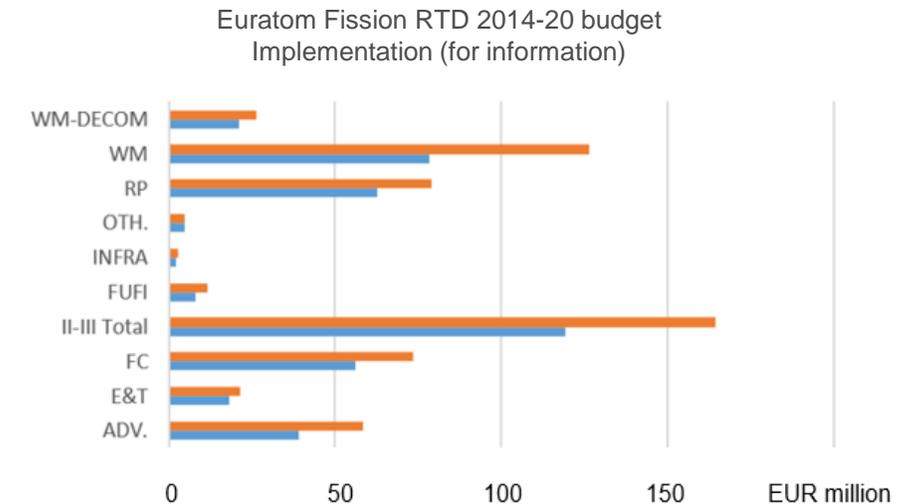
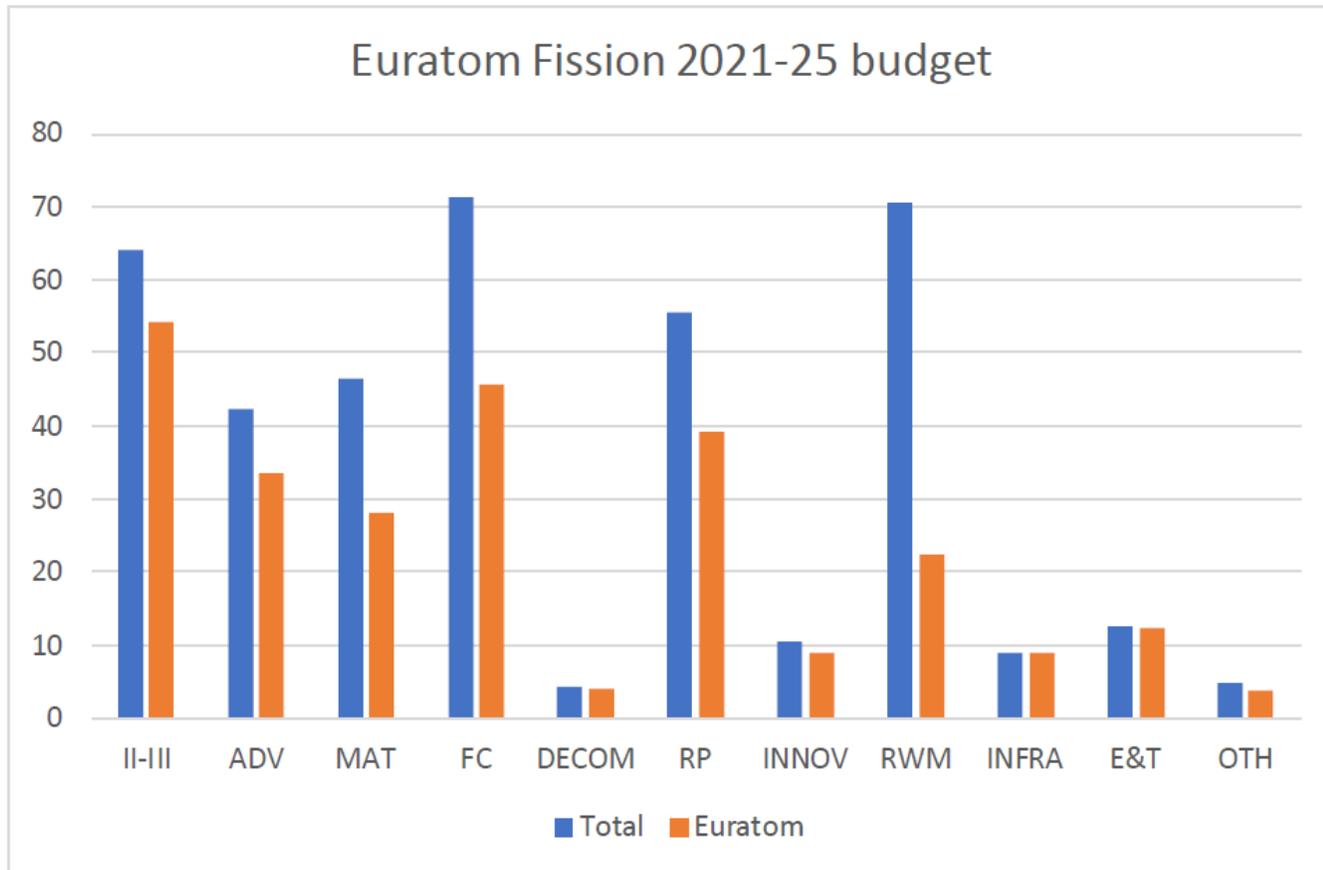


**BUILDING EUROPEAN  
NUCLEAR COMPETENCE**

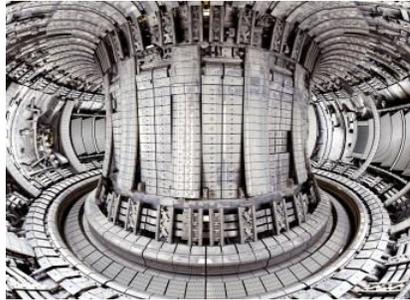
**OFFERR – European User Facility Network**



# Euratom Fission RTD 2021-25 budget

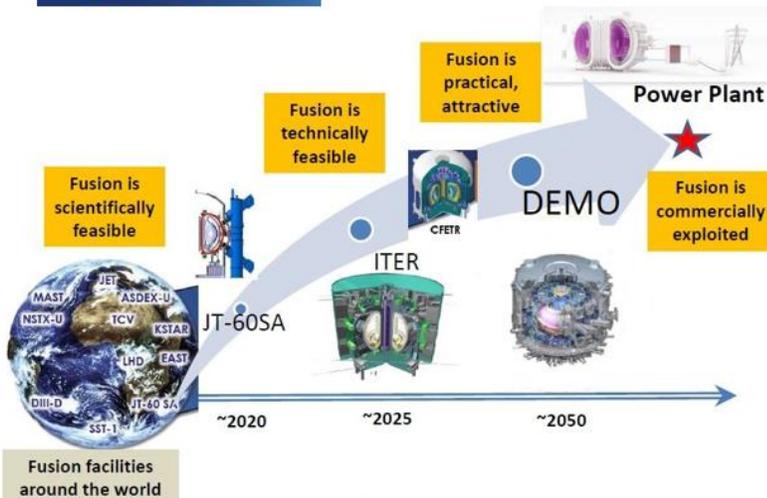


# EUROfusion, Euratom F4E and ITER



**EUROfusion Partnership** contract of around EUR 450 million (total costs EUR 1 billion for 2021-2025) implementing the Fusion roadmap <https://www.eurofusion.org/>

**European Master of Science in Nuclear Fusion and Engineering Physics (FUSION-EP)**  
<https://www.em-master-fusion.org/>



## European Joint Undertaking for ITER and the Development of Fusion Energy

**2021-2027 contribution set at EUR 5.6 billion.**

ITER is an international collaborative project (EU, US, China, Japan, India Russia, South Korea)

<https://fusionforenergy.europa.eu/> and <https://www.iter.org/>

# Euratom WP2026-27 Actions (Fission and Fusion) [**..DRAFT Proposal..**]

EUR million  
EC contr./prop

Total Budget  
(indicative)

Proposals  
(indicative)

2025.1 RIA - Safety of operating nuclear power plants and research reactors .....	3	15	5
.2 RIA - Safety of SMRs, advanced and innovative nuclear reactors and fuels .....	3	15	5
.3 CSA - Enhancing the European nuclear competence area .....	5	5	1
.4 CSA - Strengthening a European user facility for nuclear research .....	7	7	1
.5 IA – Towards EU production of stable isotopes for medicine therapies (SAMIRA/ERVI) .....	2	2	1
.6 CSA - Support for SNETP to address cross-sectorial and non-power applications of ionising radiation .....	0.5	0.5	1
.7 CSA - Scaling AI-Driven Knowledge Management and Knowledge Preservation .....	1	1	1
2026.1 COFUND - European partnership for research in nuclear materials .....	15	15	1
.2 COFUND - European Partnership for R&I in radiation protection and detection of ionising radiation .....	15	15	1
.3 IA - Key enabling technologies for fusion power plants (European Partnership on Fusion) .....	8	32	4
2027.1 IA - Key enabling technologies for fusion power plants (European Partnership on Fusion) .....	15	45	3

## Other Actions:

- COFUND - Co-funded European Partnership for fusion research (EUROfusion)
- COFUND - Co-funded European partnership on radioactive waste management (EURAD-2)
- E&T capacity building, and networking actions to support Ukrainian research
- Open access to JRC research infrastructure in coordination with OFFERR
- FISA-EURADWASTE 2028 organized under Italian Presidency of the Council of the EU
- SOFT Prize 2028, Nuclear Innovation Prize 2028 (RS, RWM, RADIOPRO)
- Contribution to the GIF Secretariat for the Generation-IV International Forum
- E&T and networking actions to strengthen Ukrainian and EU nuclear research
- External Expertise
- EIC Accelerator Challenge on Fusion Energy
- MSCA in nuclear research and training

Associated  
Countries  
to Euratom



140

30

0.5

0.5

0.3

0.1, 0.3

0.25 x2

2

0.5

20

1, 1

1

**Overall Euratom WP2026-27 Call indicative budget**

**109 (fission)**

**238 (fusion)**

**18**



## Discover the funding & tenders opportunities

Find out how to participate by following these key steps.

### Find calls for proposals

Explore the available EU funding opportunities by searching for calls for proposals within your topics of interest, find partners and submit a proposal.

### Find calls for tenders

Find business opportunities in the calls for tenders managed by EU institutions, bodies and agencies.

### View projects and results

Browse through EU funded projects and learn about the results. Invest in opportunities and get inspired by the highlights and success stories.

### Work as an expert

Proposals and projects need evaluations, monitoring and domain-specific knowledge advice from experts.

[Report fraud](#)

**Funding & tender opportunities, Find calls for proposals and tenders**  
<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>



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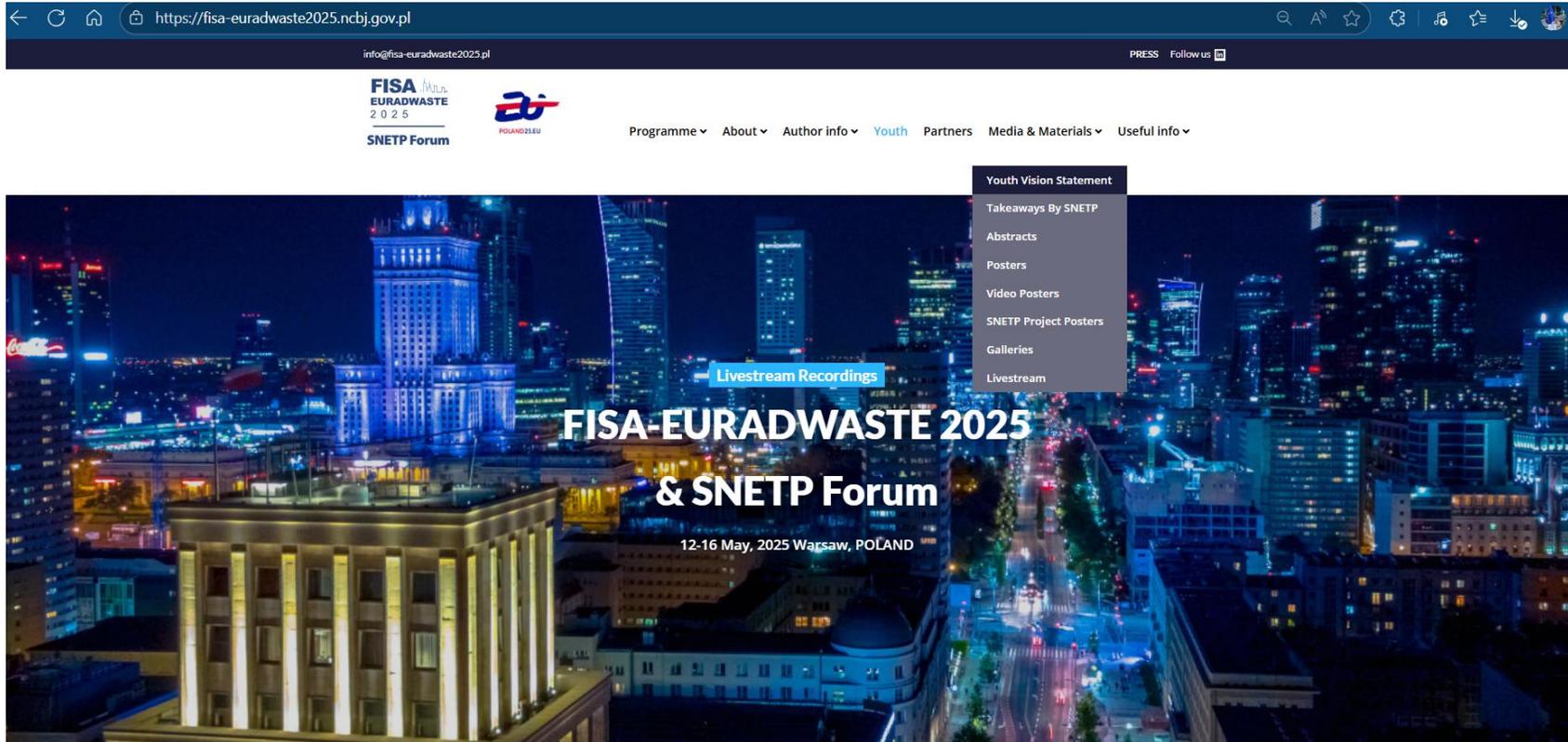
- Taxonomy Delegated Act, Green Deal and Financing, EU Energy and Industrial Policies Looking forward, Competitiveness Compass, PINC 2025, FP10 Horizon Europe, next Framework Programme for R&I

4. *European Industrial Alliance on SMRs*



A Big Thank You to ALL Spanish Colleagues and Friends involved !

## SNETP Forum



FISA EURADWASTE 2025 (2min video) [https://fisa-euradwaste2025.ncbj.gov.pl/files/video/Fisa\\_rolka\\_8A.mp4](https://fisa-euradwaste2025.ncbj.gov.pl/files/video/Fisa_rolka_8A.mp4)

11<sup>th</sup> European Commission Conference on EURATOM Research and Training  
in Reactor Safety & Radioactive Waste Management



# FISA-EURADWASTE 2025 & SNETP Forum in Warsaw (PL), 12-16 May 2025

Under the Polish Presidency of the Council of the EU



One Plenary room up to 500 persons, three parallel rooms 120-150 persons

## High-Level Opening

**1 day** Young Generation Network, Awards and Atomic Careers' Day

**3 full days** FISA-EURADWASTE 2025 and SNETP Forum 2025

- High-level Opening / Closing plenary sessions
- **4** Plenaries (I to IV)
- **12** Parallel sessions
- **100** students invited (Posters), 80+ Euratom projects, 174 Posters in total

**1 day** Technical tours

Several Prizes Nuclear Innovation Prize, R&D Awards, ENEN PhD Event & Prize

Exhibition Stands and Posters

EPJ-N special editions and Proceedings of the conferences in 2025

**ENS-YGN 250+** participants

**Open Call MSc/PhD/R&D** Awards Competition,

**Nuclear Innovation Prize, Poster Exhibition,**

**SNETP Forum** and **ENEN PhD Event & Prize**

**Meet & Match, 720+** Attendees, **49** Nations



51

Companies



35

Universities



29

Gov. Org.



28

Res. Org.



13

NGOs



SNETP GB

CEA/NCBJ

JRC/NCBJ

Westinghouse/INSA

ENEN Safeguards



**Euratom4U** iOS Android App. & desktop version

<https://fisa-euradwaste2025.ncbj.gov.pl/>



European  
Commission

# Key Messages and Outcomes

1/3

- 1. Nuclear Energy as a Pillar of Decarbonisation & Climate Strategy:** With a focus on achieving 90% greenhouse gas reduction by 2040, nuclear energy remains essential for the EU's strategy to reach climate neutrality by mid-century.
- 2. Security of Energy Supply:** Nuclear energy's contribution to a stable, dispatchable power supply continues to be a cornerstone for Europe's energy future.
- 3. Technological Leadership and SMRs:** The event emphasized the need for Europe to enhance its efforts in next-generation nuclear technologies, including Small Modular Reactors (SMRs) and fusion energy. This discussion ties into broader global investments in these innovative solutions and underscores Europe's need to maintain a competitive edge in nuclear research and development.
- 4. Rebuilding Momentum for Nuclear New Build:** Lessons from recent large-scale projects underscore the importance of standardisation, modular construction, and supply chain integration. Addressing first-of-a-kind (FOAK) challenges, improving workforce capacity, and fostering EU-wide technical alignment are critical for delivering timely and cost-effective nuclear infrastructure.
- 5. Innovation for Strategic Autonomy and Fuel Cycle Closure:** Europe must pursue a dual-track strategy: maturing near-term technologies (e.g. ATFs, MOX, HALEU) while supporting breakthrough innovations in fast reactors, multi-recycling, and advanced materials. EU-funded collaborative R&D remains central to reducing waste, enhancing safety, and achieving closed fuel cycles.

6. **Non-Electric Applications and Hybrid Systems:** Nuclear energy's role extends beyond electricity to industrial heat, hydrogen production, and district heating. High-temperature reactors (e.g., HTGRs) and SMRs are seen as strategic assets for decarbonising hard-to-abate sectors. Cross-sector partnerships and targeted R&D (e.g., TANDEM, GEMINI) are key to scaling these hybrid applications.
7. **Youth and Social Engagement:** A key highlight was the active participation of the younger generation, with 18% of attendees being early-career professionals. The event also showcased the importance of integrating ethical and social considerations into nuclear energy research, while fostering a strong societal dialogue on the future of nuclear energy.
8. **Cross-Sector Cooperation and Innovation:** The Forum brought attention to the growing importance of cross-sector innovation, including the integration of digital tools, artificial intelligence, and high-tech applications, which will be essential for enhancing nuclear safety and sustainability.
9. **Support from Key Institutions:** The European Commission, European Investment Bank (EIB), and the World Bank are all increasingly aligned with nuclear energy's role in Europe's decarbonisation and energy security efforts, with initiatives such as the Euratom research programme and IPCEI (Important Project of Common European Interest) paving the way for further cross-border investments in nuclear innovation.
10. **Strengthening Europe's Research Infrastructure and International Cooperation:** The event highlighted the importance of open-access research facilities, cross-border data sharing, and coordinated international efforts. Long-term investment in pan-European infrastructures and collaboration with global partners are essential to sustain scientific leadership, accelerate innovation, and ensure the safe deployment of advanced nuclear technologies.

# Key Messages and Outcomes 3/3 Youth Vision Statement Nuclear by 2050: A Vision for Action

## Youth Vision Statement Nuclear by 2050: A Vision for Action

FISA  
EURADWASTE  
2025  
SNETP Forum

We are the next generation of nuclear professionals, engineers, scientists, and decision-makers. We came together to identify what must happen for nuclear energy to become a major player in the clean energy transition by 2050. We are here to help you be the driving force for change and take over the sector in the future.

This statement reflects our ideas, our concerns, and our commitment to a better future. These are our priorities, and we ask you to consider them.

We, the young generation, want a decarbonized future with new nuclear driving the transition through innovation, social acceptance, international cooperation, and financial viability.

We urge policymakers to foster collaboration in R&D and regulatory frameworks while creating favorable conditions for investment.

In order to succeed, nuclear has to not only be accepted by the public, but also be appealing and attractive. Let's make a game, a positive TV show to spread the word. Let us create a culture of demand for nuclear.

Let's make nuclear science exciting through modern education that fosters cooperation and a strong nuclear culture.

To ensure equal access to opportunities in the nuclear sector, governments, NGOs, industrial leaders, and educational institutions should take responsibility for policies providing access to opportunities, regardless of age, gender, nationality, or social status. We urge an inclusive environment to help end energy poverty, gender disparity, and poor work-life balance.

We request you to ensure and make people understand that nuclear waste is safely managed and poses no threat when properly handled.

We ask the governments to implement Long Term Operations of Europe's Nuclear Power Plants, as an immediate solution to reach European net zero targets. It is based on constantly upgraded, proven technology, while maintaining highly skilled jobs and providing security and stability to the energy grid.

#YouthVision2050

## Youth Vision Statement Nuclear by 2050: A Vision for Action

FISA  
EURADWASTE  
2025  
SNETP Forum

We call for out-of-the-box thinking to unlock new applications of nuclear power through innovation, and bring technological advancements—especially in areas where it has not yet been considered.

We urge industrial leaders to foster digital transition. Digital tools are no longer optional in nuclear energy—they are strategic assets that enhance safety, drive efficiency, and future-proof our clean energy infrastructure.

Our fresh perspective, combined with your knowledge and expertise, makes us a formidable asset. Involve us in the decision-making process as equals to build a better future for all of us.

Young Generation at FISA-Euradwaste

& SNETP Forum 2025

[https://fisa-  
euradwaste2025.ncbj.gov.pl/sites/fisa-  
euradwaste2025.ncbj.gov.pl/files/2025-  
06/youth-vision-statement.pdf](https://fisa-<br/>euradwaste2025.ncbj.gov.pl/sites/fisa-<br/>euradwaste2025.ncbj.gov.pl/files/2025-<br/>06/youth-vision-statement.pdf)



# 19<sup>th</sup> SET-Plan Conference 4-5.11.2025

The Strategic Energy Technology (SET) Plan  aims to achieve the EU's energy and climate goals and make Europe a global leader in clean energy and energy efficiency technologies.



EU2025DK

19<sup>th</sup> SET Plan Conference

Strategic energy technologies for a competitive, secure and sustainable Europe

4<sup>th</sup> & 5<sup>th</sup> of November 2025  
Odense, Denmark



**Jessica Johnson**

Communications & Advocacy Director  
at Nuclear Europe



**Amparo Soler**

President, Woman in Nuclear



**Klaus Nyengaard**

CEO of Saltfoss Energy

**16:00 - 17:00**

## **Parallel Session 2 (Breakout room 2)**

### **Nuclear Solutions for Europe's Affordable and Inclusive Needs**

Nuclear energy is a key player in Europe's clean energy mix. This session explores Small Modular Reactors (SMRs), safety, public acceptance, and cross-border cooperation. It aligns nuclear innovation with affordability and inclusivity goals.

#### **Participants:**

- Klaus Nyengaard, CEO, Saltfoss
- Amparo Soler, Women in Nuclear Global
- Jessica Johnson, Director, Nuclear Europe

*Moderator: Vincenzo Randinella, Head of Department for Nuclear Safety and Security, Joint Research Centre*

**DK Conference Website** <https://www.setplan2025.dk/set-plan>  
2025 Progress report [https://setis.ec.europa.eu/index\\_en](https://setis.ec.europa.eu/index_en)  
and <https://publications.jrc.ec.europa.eu/repository/handle/JRC143953>





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- Taxonomy Delegated Act, Green Deal and Financing, EU Energy and Industrial Policies Looking forward, Competitiveness Compass, PINC 2025, FP10 Horizon Europe, next Framework Programme for R&I

*4. European Industrial Alliance on SMRs*

# A new World (Dis)Order emerges 1/2



# A new World (Dis)Order emerges 2/2

**!!! Israel – Palestine War!!!**



**!!! U. von der Leyen reelected !!!**



**!!! D. Trump v2.0 !!!**



**China-Russia Axis**



**French retreat of Africa**



**2023** → **2024**

**+ North Korea**



**XV Brics Summit**



- ✓ Egypt
- ✓ Ethiopia
- ✓ Iran
- ✓ Saudi Arabia
- ✓ UAE



## 'A Turning Point': First Ever Nuclear Energy Summit

<https://www.iaea.org/newscenter/news/a-turning-point-first-ever-nuclear-energy-summit-concludes-in-brussels>

[https://energy.ec.europa.eu/news/president-von-der-leyen-and-commissioners-take-part-nuclear-energy-summit-and-events-nuclear-2024-03-20\\_en](https://energy.ec.europa.eu/news/president-von-der-leyen-and-commissioners-take-part-nuclear-energy-summit-and-events-nuclear-2024-03-20_en)

**COP28 (13 December 2023, Dubai) was the first time nuclear power had been included** in the Global Stocktake, a final agreement that assesses where the world stands on achieving the objectives of the 2015 Paris Agreement and how shortcomings might be rectified. In total, **22 countries agreed to work towards tripling nuclear power capacity by 2050**

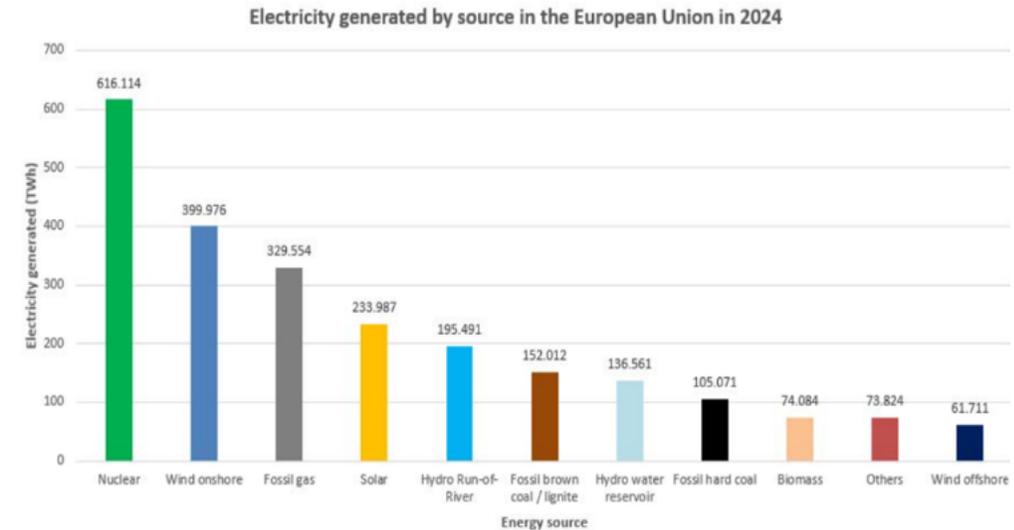
<https://www.iaea.org/topics/climate-change/the-iaea-and-cop/cop28/highlights>

**COP29 (11-22 November 2024)** in Baku (AZ), <https://unfccc.int/>

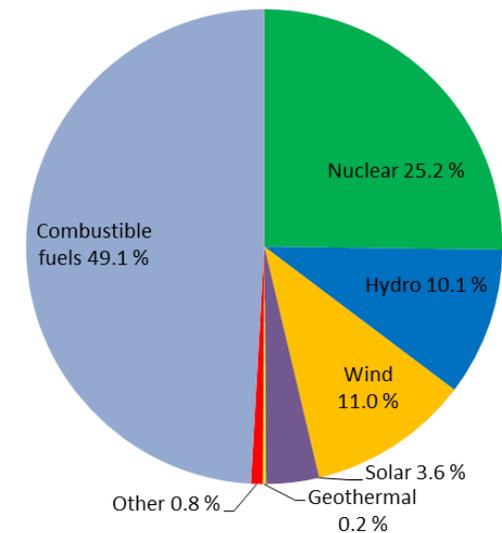
**COP30 (10-21 November 2025)** in Belem (BZ) ....

# EU nuclear energy context

- 103 nuclear reactors are in operation in 13 EU Member States
- Nuclear energy provides about **25%** of EU gross electricity generation, around **50%** of EU low-carbon electricity generation, and supports around **1 mil. jobs**
- In EU, each Member State can decide on the inclusion of nuclear power in its energy mix
- New reactors under construction FR, FI, Slovakia are operating
- About 20 reactors are in different stages of planning and preparation in EU Member States (BG, CZ, EE, FI, FR, HU, LT, NL, PL, RO, SE, SK)

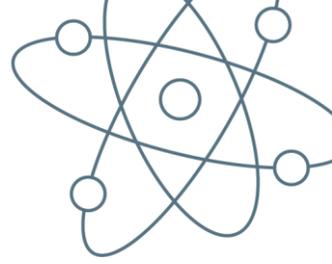


Gross electricity generation shares in THE EU



Source: EU Energy in figures. Statistical pocketbook 2019. European Commission [https://publications.europa.eu/s/m4zv]

# EU Energy & Industrial Policies



## EU Climate Neutrality Objective

The EU sets a goal to achieve climate neutrality by 2050.



## REPowerEU Roadmap

A strategy to phase out Russian oil and gas, restrict nuclear materials imports, and accelerate the clean energy transition.



## Competitiveness Compass

A roadmap to revitalise Europe's economic dynamism and foster sustainable growth



## Clean Industrial Deal

An initiative to support the reduction of carbon emissions in energy-intensive sectors



## Affordable Energy Action Plan

A plan to lower energy prices and reduce overall energy costs



## EU Start-up & Scale-up Strategy

A strategy to promote innovation-friendly regulation and enhance access to finance.



## Amendment to EU Climate Law

A proposal to establish a 2040 target to reduce net greenhouse CO<sub>2</sub> emissions by 90%.



## Net-Zero Industry Act

A legislative tool to strengthen and revitalise the nuclear supply chain



## Nuclear Illustrative Programme (PINC)

A comprehensive overview of nuclear energy investments across the EU.



## SMRs Strategy

A strategy expected to be adopted in 2026 to promote small modular reactors



# Competitiveness Compass for the EU 29.01.2025



An EU Compass to regain competitiveness and secure sustainable prosperity

The Draghi Report identified three transformational imperatives to boost competitiveness, and the Compass sets out an approach and a selection of flagship measures to translate each of these imperatives into reality

The Compass sets a path for Europe to become the place where future technologies, services, and clean products are invented, manufactured, and put on the market, while being the first continent to become climate neutral.

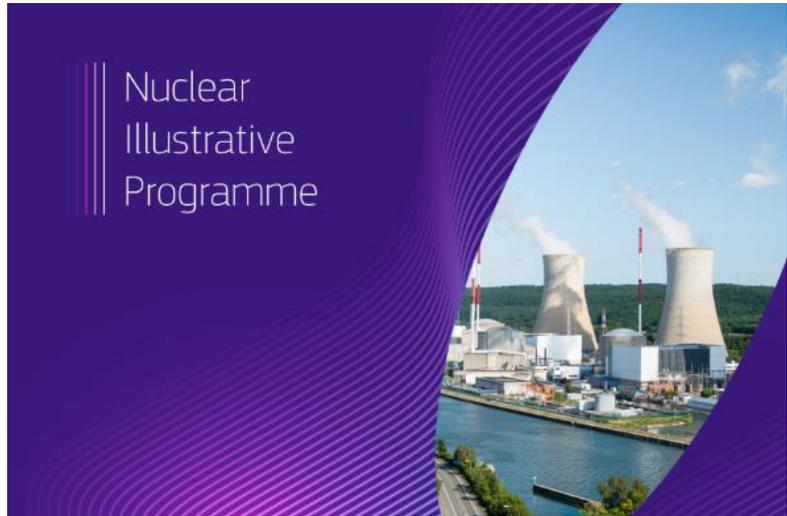
An EU Compass to regain competitiveness and secure sustainable prosperity

FACTSHEET [https://ec.europa.eu/commission/presscorner/detail/en/fs\\_25\\_338](https://ec.europa.eu/commission/presscorner/detail/en/fs_25_338)

<https://ec.europa.eu/commission/presscorner/api/files/attachment/880290/Factsheet%20-%20Competitiveness%20Compass.pdf>

Press release Jan 29, 2025 [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_25\\_339](https://ec.europa.eu/commission/presscorner/detail/en/ip_25_339)

# Nuclear Illustrative Programme (PINC) 13.06.2025



Under the Euratom Treaty's Article 40, the Commission is required to periodically publish a Nuclear Illustrative Programme (PINC)

## Key takeaways

- 📄 investments of around €241 billion by 2050 will be needed to deliver on EU countries' nuclear goals
- ⚡ installed nuclear capacity is predicted to grow from 98 GWe in 2025 to 109 GWe in 2050
- 🛡️ ensuring the highest standards of nuclear safety will continue to be a top priority for the EU, and efforts will be needed to roll out more infrastructure for the proper disposal of radioactive waste
- 🤝 international collaboration with reliable partners can help to provide a stable, diversified energy supply
- 🧑🏫🔬 innovation in the EU can be bolstered through upskilling the workforce, attracting new talent, and supporting start ups

[https://energy.ec.europa.eu/topics/nuclear-energy/nuclear-investment-needs\\_en](https://energy.ec.europa.eu/topics/nuclear-energy/nuclear-investment-needs_en)  
[https://ec.europa.eu/commission/presscorner/detail/en/ip\\_25\\_1488](https://ec.europa.eu/commission/presscorner/detail/en/ip_25_1488)

# FP10, Next Framework Programme for R&I

Time	Action
May 2024	<u><a href="#">Single Market Report by Enrico Letta</a></u>
June 2024	<u><a href="#">ERAC Opinion on Guidance for the next Framework Programme for Research &amp; Innovation</a></u>
September 2024	<u><a href="#">Publication of the so-called Draghi Report: The future of European competitiveness – A competitiveness strategy for Europe</a></u>
October 2024	<u><a href="#">Advice on the future Framework Programme by the High Level Expert Group, chaired by former Portuguese Minister for Research Manuel Heitor</a></u>
November 2024	<u><a href="#">Draft report on the assessment of the implementation of Horizon Europe in view of its interim evaluation and recommendations for the 10th Research Framework Programme (2024/2109(INI))</a></u> the European Parliament's Committee on Industry, Research, and Energy (ITRE)
December 2024	<u><a href="#">EARTO Paper on European Partnerships in FP10: How to boost Future EU Public-Private Partnerships?</a></u>
January 2025	<u><a href="#">Opinion of the Partnership Knowledge Hub (PKH) on Partnerships in FP10</a></u>
February 2025	Publication of the <u><a href="#">Interim Evaluation of Euratom</a></u>
March 2025	Proposal for <u><a href="#">extension of Euratom Research and Training 2026-27</a></u> and following <u><a href="#">Euratom STC Opinion</a></u>
April 2025	Publication of the <u><a href="#">Interim Evaluation of Horizon Europe</a></u>
June 2025	Council Regulation (Euratom) 2025/1304 of 23 June 2025 <u><a href="https://eur-lex.europa.eu/eli/reg/2025/1304/oj/eng">https://eur-lex.europa.eu/eli/reg/2025/1304/oj/eng</a></u>
16 July + 3 Sept. 2025	Legislative Proposal for the <u><a href="#">10th Framework Programme by the European Commission</a></u>
Before the end of 2027	Negotiations in Council and at the European Parliament and Adoption of the FP10 Package
2028	Start of FP10

# MFF Proposal 2028-34

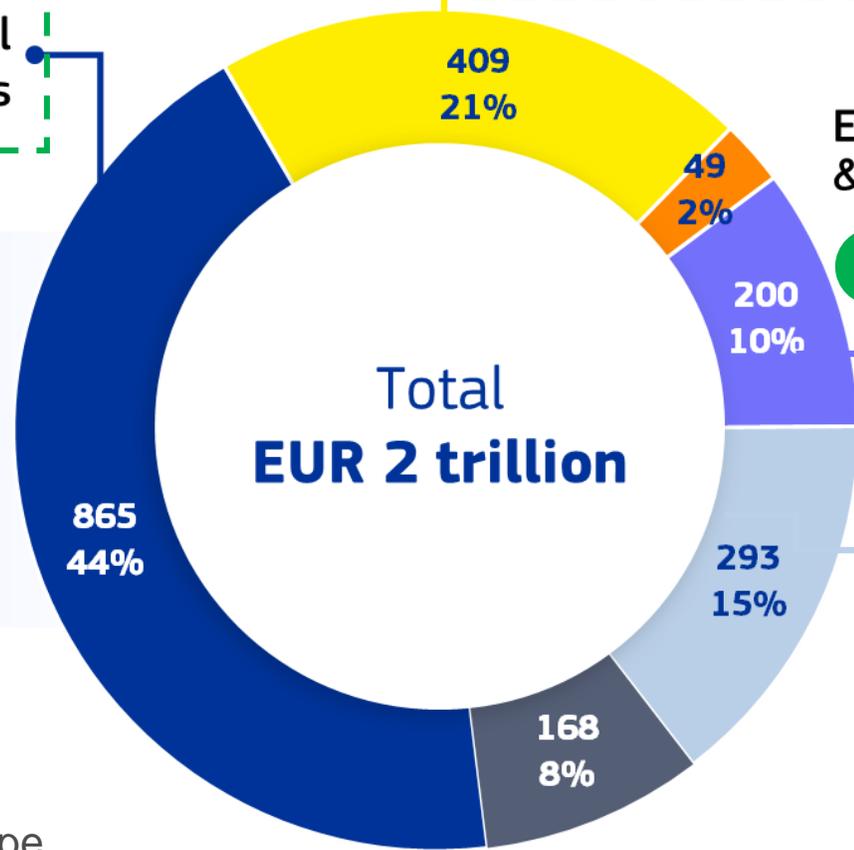
Three funds account for 75% of an ambitious proposal for the future MFF

1 National and Regional Partnership Plans

2 European Competitiveness Fund  
(incl. Horizon Europe), Innovation Fund 41bn not included

Erasmus+ & AgoraEU

3 Global Europe



- CEF
- Civil protection and health
- Single Market Programme
- Euratom Research & Training
- CFSP
- Justice
- Nuclear Decommissioning
- OCT
- Pericles

- From 52 to **16 programmes**
- **Simpler** for beneficiaries
- **Results** oriented
- More **agile**

The EU Budget 2028-34 for a stronger Europe  
[https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/eu-budget-2028-2034\\_en#factsheets](https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/eu-budget-2028-2034_en#factsheets)

NextGenerationEU  
repayment



# MFF and Horizon Europe proposal 2028-34

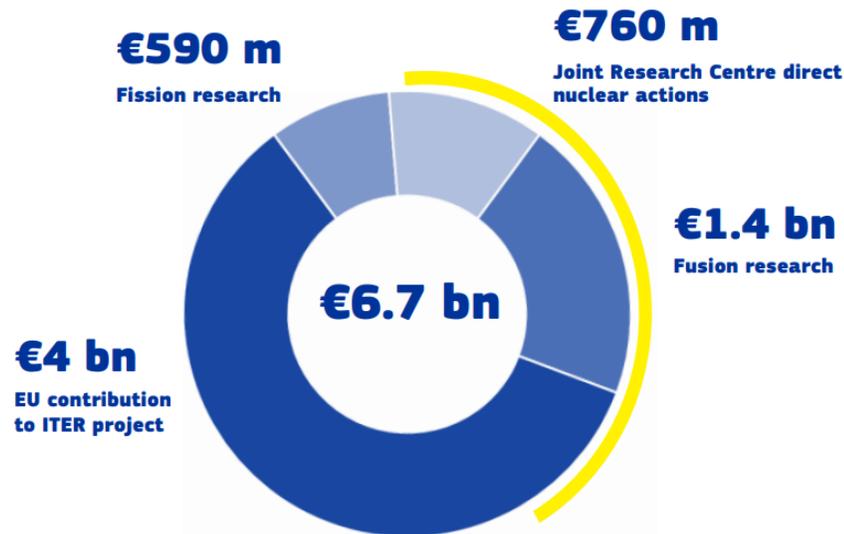
With a proposed **€175 billion** budget, the new programme will be based on four pillars.

<b>Pillar I</b>	<b>Pillar II</b>	<b>Pillar III</b>	<b>Pillar IV</b>
EXCELLENT SCIENCE	COMPETITIVENESS AND SOCIETY	INNOVATION	EUROPEAN RESEARCH AREA
<b>€44.079 BILLION</b>	<b>€75.876 BILLION</b>	<b>€38.785 BILLION</b>	<b>€16.262 BILLION</b>
EUROPEAN RESEARCH COUNCIL	<b>COMPETITIVENESS<sup>1</sup> :</b> <ol style="list-style-type: none"> <li>Clean Transition and Industrial Decarbonisation</li> <li>Health, Biotech, Agriculture and Bioeconomy</li> <li>Digital leadership</li> <li>Resilience and Security, Defence Industry and Space</li> </ol>	EUROPEAN INNOVATION COUNCIL	ERA POLICIES
MARIE SKŁODOWSKA-CURIE ACTIONS	<b>SOCIETY:</b> <ol style="list-style-type: none"> <li>Global societal challenges</li> <li>EU Missions</li> <li>New European Bauhaus Facility</li> </ol>	INNOVATION ECOSYSTEMS AND THE KNOWLEDGE TRIANGLE	RESEARCH AND TECHNOLOGY INFRASTRUCTURES
SCIENCE FOR EU POLICIES			WIDENING PARTICIPATION AND SPREADING EXCELLENCE

<sup>1</sup> Consistent with activities under the European Competitiveness Fund

# EUROPE'S BUDGET, Euratom research & training programme 2028-2032

What does it mean in financial terms?



How will the budget make a difference in this area?

-  **Accelerate coming to market of fusion energy**, from scientific discoveries to practical applications
-  **Enhance innovation in nuclear technology**, SMRs, fuels, materials, fusion energy and tech transfer
-  **Continue fostering open access to nuclear research infrastructures**
-  **Engage EU private sector and startups in nuclear research**
-  **Enhance safety, security and safeguards**, and reinforce non-proliferation and trade control
-  **Support Member States** in safe radioactive waste disposal and storage
-  **Improve radiation protection** and advance the use of ionising radiation in cancer treatments, and applications in space, industry, environmental monitoring
-  **Strengthen training for a skilled nuclear workforce**, building EU's independence in nuclear research

The EU Budget 2028-34 for a stronger Europe [https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/eu-budget-2028-2034\\_en#factsheets](https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/eu-budget-2028-2034_en#factsheets)

Euratom Facsheet [https://commission.europa.eu/document/download/1e13a120-1a7e-4998-99c1-4499e3a48439\\_en?filename=EURATOM\\_Factsheet\\_SPP%20final\\_05-09.pdf](https://commission.europa.eu/document/download/1e13a120-1a7e-4998-99c1-4499e3a48439_en?filename=EURATOM_Factsheet_SPP%20final_05-09.pdf)

# Budget for Euratom research (details)

	<b>(million Euro)</b>		
	<b>2028-32</b>	<b>2028-34</b>	
	<b>(5 years)</b>	<b>(7 years)</b>	<b>per year</b>
<b>Fusion energy R&amp;D</b>	1379	2038	291
<b>Fission R&amp;D</b>	590	873	125
<b>Direct actions by JRC</b>	760	1089	156
<b>ITER</b>	3953	5794	828
<b>Total</b>	<b>6682</b>	<b>9794</b>	<b>1399</b>



Research Framework Programme	Total EU FP funding (EUR billion)	Total Complementing EU FP - EURATOM funding (EUR billion)	EURATOM funding (EUR million) for <b>Fission</b> (indirect actions) <b>Fusion</b> (indirect actions) <b>JRC</b> (direct actions)	ITER funding for its construction (EUR billion)
FP4 (1994-1998)	<b>11.88</b>	<b>1.23</b>	<b>170 - 794 - 271</b>	-
FP5 (1998–2002)	<b>13.70</b>	<b>1.26</b>	<b>191 - 788 - 281</b>	-
FP6 (2002–2006)	<b>17.88</b>	<b>1.35</b>	<b>209 - 824 - 319</b>	-
FP7 (2007–2013)	<b>50.52</b>	<b>2007-11 = 1.45</b>	<b>287 - 654* - 514</b>	<b>(2007-2020 = 6.6 cap)</b> <b>2007-11 = 1.3</b>
		<b>2012-13 = 0.55</b>	<b>118 - 197* - 233</b>	<b>2012-13 = 1.3 (+)</b>
FP8 <b>Horizon 2020</b> (2014-2020)	<b>~86</b>	<b>2014-18 = 1.79</b>	<b>355 - 710* - 724</b>	<b>ITER 2014-20 = 2.7</b>
		<b>2019-20 = 0.771</b>	<b>152 - 350* - 269</b>	
FP9 <b>Horizon Europe</b> (2021-2027)	<b>~100</b>	<b>2021-25 = 1.674</b>	<b>266 - 583* - 532</b>	<b>ITER 2021-27 = 5.6</b>
		<b>2026-27 = 0.597</b>	<b>115 - 252* - 230</b>	
FP10 <b>Horizon Europe</b> (2028-2034) (Commission proposal COM/2025/570 final 16.07.2025)	<b>~175</b>	<b>2028-32 = 2,729</b> <b>(2032-34 = 1,271)</b>	<b>590 - 1,379* - 760</b> <b>283 - 659* - 329</b> (2028-34... x2.29 - x2.34 – x1.43) <b>* Excludes ITER construction</b>	<b>ITER 2028-34 = 5.8</b>



*1. EU/Euratom Research & Training Ecosystem, and Spain*

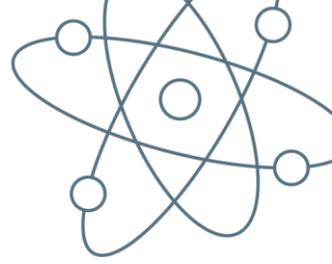
*2. FISA-EURADWASTE 2025 and SNETP Forum, Key Messages & Outcomes, and Youth Vision Statement*

*3. Year 2022, a turning point for a nuclear revival, and a new World (Dis)Order emerges*

- Taxonomy Delegated Act, Green Deal and Financing, EU Energy and Industrial Policies Looking forward, Competitiveness Compass, PINC 2025, FP10 Horizon Europe, next Framework Programme for R&I

***4. European Industrial Alliance on SMRs***

# European IA on SMRs 2<sup>nd</sup> General Assembly



Brussels, September 1, 2025



The meeting was set to endorse the Alliance's Strategic Action Plan for 2025–2029 and further refine the targeted actions needed to support the [9 projects identified by the Alliance in October 2024](#).

This annual high-level event will bring together representatives of more than [350 Alliance members](#)\* to take stock of the progress made and path the way-forward for intensifying the work and advancing the implementation of the Alliance' targets. The meeting will also offer an opportunity to discuss broader initiatives, such as [Important Projects of Common European Interest](#) (IPCEI) and [Net Zero Industry Act](#) (NZIA).

Attended by 3  
EU  
Commissioners



**VP Stephane Sejourne**  
Commissioner for  
Prosperity and Industrial  
Strategy



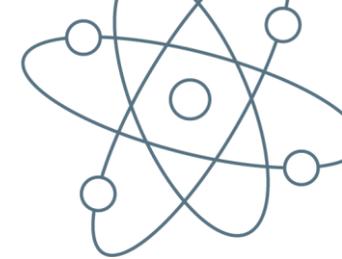
**Commissioner Dan Jorgensen**  
Commissioner for  
Energy and Housing



**Commissioner Ekaterina Zaharieva**  
Commissioner for Startups,  
Research and Innovation

[https://energy.ec.europa.eu/events/general-assembly-european-industrial-alliance-small-modular-reactors-2025-09-01\\_en](https://energy.ec.europa.eu/events/general-assembly-european-industrial-alliance-small-modular-reactors-2025-09-01_en)

# Strategic Action Plan – The Way Forward



## 8 Technical Working Groups

TWGs' Action Plans. A total of **40 tasks** were identified.



## 9 Project Working Groups

Identification of PWGs needs  
Targeted support to PWGs after reassessment



## Alliance Members' Consultations

Identification of key hurdles, strategic & specific actions to drive progress



## Research & Innovation

Alliance's key innovative research areas for SMRs/AMRs and main SMRs/AMRs technologies in the EU



## Time Targeted Actions

**Top ten actions** to drive SMRs/AMRs projects forward



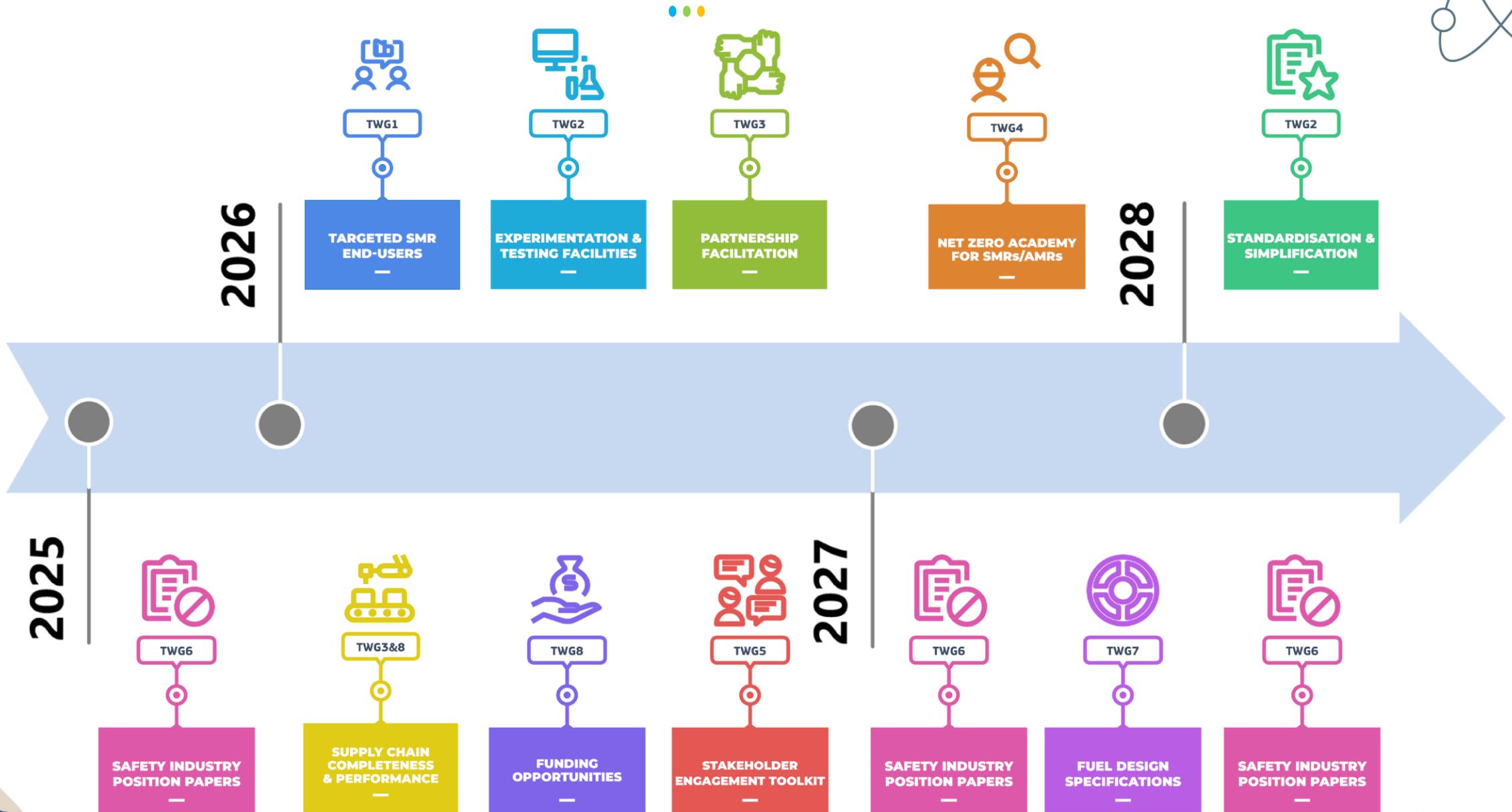
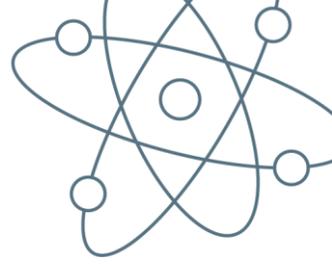
## Effective Implementation

Action plans structured around the 8 TWGs, streamlined feedback and rigorous progress monitoring

**Strategic Action Plan  
2025-2029**

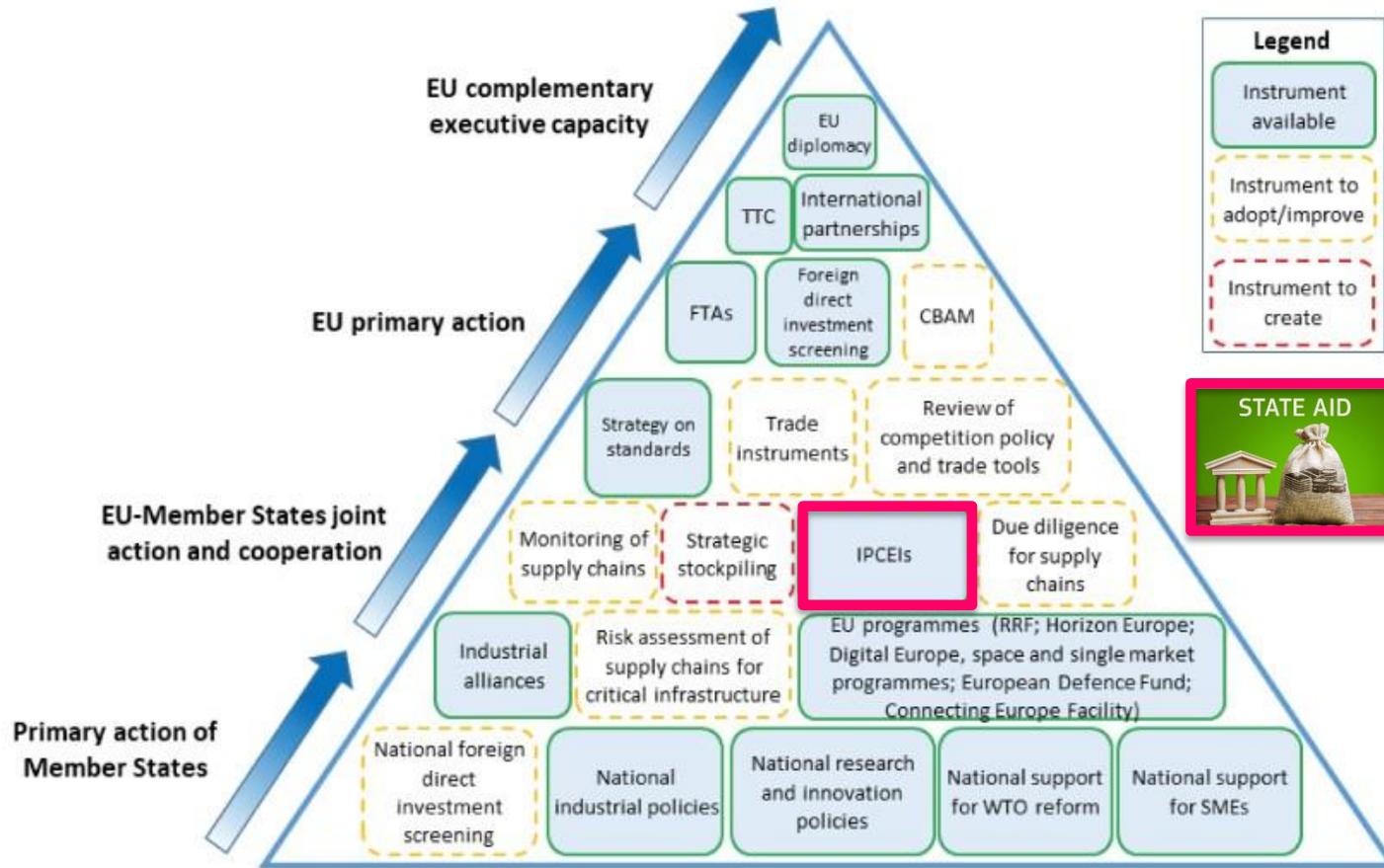
[https://single-market-economy.ec.europa.eu/news/european-industrial-alliance-small-modular-reactors-unveils-strategic-action-plan-2025-09-12\\_en](https://single-market-economy.ec.europa.eu/news/european-industrial-alliance-small-modular-reactors-unveils-strategic-action-plan-2025-09-12_en)

# Ten Top Actions for the next 3 years



# Establishing greater strategic autonomy for European industry

Pyramid of instruments at the disposal of the EU and its Member States

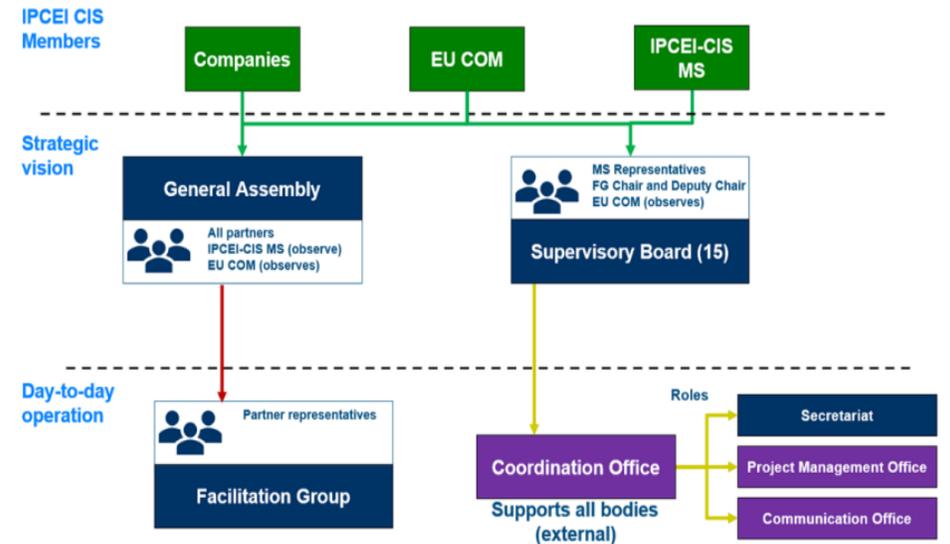


Note: The size of each square does not have any meaning.

EPRS | European Parliamentary Research Service



[https://single-market-economy.ec.europa.eu/industry/strategy/industrial-alliances/european-industrial-alliance-small-modular-reactors\\_en](https://single-market-economy.ec.europa.eu/industry/strategy/industrial-alliances/european-industrial-alliance-small-modular-reactors_en)



**IPCEI Cloud, Infos**, Brussels, 5.12.2023, C(2023) 8552 final  
[https://www.bmwk.de/Redaktion/EN/Downloads/D/decision-of-the-european-commission-regarding-the-ipcei-cis.pdf?\\_\\_blob=publicationFile&v=4](https://www.bmwk.de/Redaktion/EN/Downloads/D/decision-of-the-european-commission-regarding-the-ipcei-cis.pdf?__blob=publicationFile&v=4)

## Future Shocks 2022: Establishing greater strategic autonomy for European industry

<https://epthinktank.eu/2022/05/17/future-shocks-2022-establishing-greater-strategic-autonomy-for-european-industry/>



# Thank you for your attention! #Euratom

