



European  
Commission

# **Small Modular Reactors (LW-SMRs and AMRs) European projects**

**Co-funded by the Euratom Research and Training Programme**

Date : 19-09-2024

*Research and  
Innovation*

## SMRs projects co-funded by the Euratom R&T Programme

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### **SMRs projects co-funded by the Euratom R&T Programme**

#### *Tangible impacts expected by 2030-2035:*

- Light Water (LW): **ELSMOR**  
Towards European Licencing of Small Modular Reactors  
Duration 48 months, Start date 1 September 2019, End date 31 August 2023  
EC contribution: EUR 3.5 million - Overall budget EUR 4.3 million  
Coordinated by VTT - Teknologian Tutkimuskeskus Oy (Finland)  
<https://cordis.europa.eu/project/id/847553>
  
- Light Water (LW): **McSAFER**  
High-Performance Advanced Methods and Experimental Investigations for the Safety Evaluation of Generic Small Modular Reactors  
Duration 42 months, Start date 1 September 2020 End date 29 February 2024  
EC contribution: EUR 4 million - Overall budget EUR 4 million  
Coordinated by KIT - Karlsruher Institut fuer Technologie (Germany)  
<https://cordis.europa.eu/project/id/945063>
  
- Light Water (LW): **SASPAM-SA**  
Safety Analysis of SMR with Passive Mitigation strategies – Severe Accident Duration 48 months, Start date 1 October 2022, End date 30 September 2026.  
EC contribution : EUR 3 million - Overall budget EUR 4.3 million  
Coordinated by ENEA - Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile (Italy)  
<https://cordis.europa.eu/project/id/101059853>
  
- Light Water SMRs (LW) **EASI-SMR**  
Ensuring Assessment of Safety Innovations for SMR  
Duration 48 months, Start date 1 September 2024, End date 31 August 2028  
EC contribution: EUR 15 million - Overall budget: EUR 20 million  
Coordinated by EDF - Électricité de France(France)  
<https://cordis.europa.eu/project/id/101164810>
  
- Light Water SMRs (LW) for district heating: **SANE**  
Safety Assessment of Non-Electric uses of nuclear energy  
Duration 36 months, Start date 1 September 2024, End date 31 August 2027  
EC contribution: EUR 3.5 million - Overall budget: EUR 3.6 million  
Coordinated by VTT - Teknologian Tutkimuskeskus Oy (Finland)  
<https://cordis.europa.eu/project/id/101163929>

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### Tangible impacts expected after 2035:

- High Temperature Gas cooled Reactor (HTGR): **GEMINI Plus**  
Conceptual design for a HTGR for supply of process steam to industry, a framework for the licensing of such system and a business plan for a full-scale demonstration.  
Duration 42 months, Start date 1 September 2017 End date 28 February 2021  
EC contribution: EUR 4 million - Overall budget EUR 4.4 million  
Coordinated by NCBJ - Narodwe Centrum Badan Jadrowych (Poland)  
<https://cordis.europa.eu/project/id/755478>
  
- Super Critical Water Reactor (SCWR): **ECC-SMART**  
Joint European-Canadian-Chinese Development of Small Modular Super-Critical Water-cooled Reactor Technology  
Duration 52 months, Start date 1 September 2020 End date 28 February 2025  
EC contribution: EUR 4 million - Overall budget EUR 9 million  
Coordinated by CVR - Centrum Vyzkumu Rez Sro (Czech Republic)  
<https://cordis.europa.eu/project/id/945234>
  
- High Temperature Gas cooled Reactor (HTGR): **GEMINI For Zero Emission**  
Nuclear cogeneration, polygeneration, decarbonisation, high temperature reactor  
Duration 36 months, Start date 1 June 2022, End date 31 May 2025  
EC contribution: EUR 2.9 million – Overall budget EUR 3.5 million  
Coordinated by FRAMATOME (France)  
<https://cordis.europa.eu/project/id/101059603>
  
- Gas cooled Fast Reactor (GFR): **TREASURE**  
Towards reliable and safe GFR  
Duration 48 months, Start date 1 October 2024, End date 30 September 2028  
EC contribution: EUR 4 million - Overall budget EUR 4.1 million  
Coordinated by Vuje AS (Slovakia)  
<https://cordis.europa.eu/project/id/101164616>
  
- Lead Fast Reactor (LFR): **LESTO**  
Lead fast reactor safety design and tools  
Duration 48 months, Start date 1 November 2024, End date 31 October 2028  
EC contribution: EUR 4 million - Overall budget EUR 4.7 million  
Coordinated by ENEA - - Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile (Italy)  
<https://cordis.europa.eu/project/id/101166337>

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- Liquid Metal: **ANSELMUS**  
Advanced Nuclear Safety Evaluation of Liquid Metal Using Systems  
Duration 48 months, Start date 1 September 2022, End date 31 August 2026  
EC contribution: EUR 3.5 million - Overall budget EUR 4.5 million  
Coordinated by SCK-CEN - Belgian Nuclear Research Centre (Belgium)  
<https://cordis.europa.eu/project/id/101061185>
  
- Sodium Fast Reactor (SFR): **ESFR-SIMPLE**  
European Sodium Fast Reactor - Safety by Innovative Monitoring, Power Level flexibility and Experimental research  
Duration 48 months, Start date 1 October 2022, End date 30 September 2026  
EC contribution: EUR 3 million - Overall budget: EUR 6.5 million  
Coordinated CEA – Commissariat à l'énergie atomique et aux énergies alternatives (France)  
<https://cordis.europa.eu/project/id/101059543>
  
- Molten Salt reactors (MSR): **MIMOSA**  
Multi-recycling strategies of LWR SNF focusing on Molten Salt technology  
Duration 48 months, Start date 1 June 2022, End date 31 May 2026  
EC contribution: EUR 5.7 million - Overall budget: EUR 6.9 million  
Coordinated by ORANO (France)  
<https://cordis.europa.eu/project/id/101061142>
  
- Molten Salt reactors (MSR): **ENDURANCE**  
EU knowledge hub for enabling molten salt reactor safety development and deployment  
Duration 48 months, Start date 1 October 2024, End date 30 September 2028  
EC contribution: EUR 4 million - Overall budget : EUR 5.2 million  
Coordinated by POLIMI - Politecnico di Milano (Italy)  
<https://cordis.europa.eu/project/id/101165896>

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### Hybrid projects

- Light Water SMRs and AMR: **TANDEM**  
Small Modular Reactor for a European safe and Decarbonized Energy Mix  
Duration 36 months, Start date 1 September 2022, End date 31 August 2025  
EC contribution: EUR 3.4 million - Overall budget: EUR 3.8 million  
Coordinated by CEA - Commissariat à l'énergie atomique et aux énergies alternatives (France)  
<https://cordis.europa.eu/project/id/101059479>
  
- Licensing of fusion and fission installations: **HARMONISE**  
Towards harmonisation in licensing of future nuclear power technologies in Europe  
Duration 36 months, Start date 1 June 2022, End date 31 May 2025  
EC contribution: EUR 2.5 million - Overall budget: EUR 2.8 million  
Coordinated by LEI - Lietuvos Energetikos Institutas (Lithuania)  
<https://cordis.europa.eu/project/id/101061643>