



# Severe Accident Modeling and Safety Assessment for Fluid-fuel Energy Reactors

## Fact Sheet

### Project Information

**SAMOSAFER**

Grant agreement ID: 847527

**DOI**

[10.3030/847527](https://doi.org/10.3030/847527)

Project closed

**EC signature date**

23 May 2019

**Start date**

1 October 2019

**End date**

31 December 2023

**Funded under**

Euratom

**Total cost**

€ 4 535 245,00

**EU contribution**

€ 3 498 000,00

**Coordinated by**

TECHNISCHE UNIVERSITEIT  
DELFT

 Netherlands

## Project description

### First tests on the safety of molten salt reactors

Molten salt reactors (MSRs) are one of several next-generation (Gen IV) nuclear reactor designs under development today. Efforts to revive older nuclear designs have been bubbling up in the EU, Russia and US, and many start-ups are trying to commercialise the technology. Further work is needed to test the safety of the reactor and the nuclear fuel cycle facilities, and demonstrate the path towards technology licensing and deployment. The EU-funded SAMOSAFER project will use advanced numerical and experimental techniques to prove the safety of MSRs. The project, which represents the first step towards large-scale validation and demonstration of

the technology, aims to ensure that MSRs can comply with all expected safety requirements.

## Fields of science (EuroSciVoc)

[natural sciences](#) > [chemical sciences](#) > [inorganic chemistry](#) > **[noble gases](#)**

[engineering and technology](#) > [environmental engineering](#) > **[energy and fuels](#)**

[natural sciences](#) > [chemical sciences](#) > [nuclear chemistry](#) > **[radiation chemistry](#)**



## Keywords

[Molten Salt Reactor](#)

[severe accident analysis](#)

[simulation models and assessment tools](#)

## Programme(s)

[H2020-Euratom - Euratom](#)

MAIN PROGRAMME

[H2020-Euratom-1.1. - Support safe operation of nuclear systems](#)

## Topic(s)

[NFRP-2018-2 - Model development and safety assessments for Generation IV reactors](#)

## Call for proposal

[NFRP-2018](#)

[See other projects for this call](#)

## Funding Scheme

[RIA - Research and Innovation action](#)

## Coordinator



## TECHNISCHE UNIVERSITEIT DELFT

Net EU contribution

**€ 736 190,90**

Total cost

**€ 834 478,58**

Address

**STEVINWEG 1**

**2628 CN Delft**

 **Netherlands** 

Activity type

**Higher or Secondary Education Establishments**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

## Participants (15)

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## CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS

 **France**

Net EU contribution

**€ 551 163,88**

Address

**RUE MICHEL ANGE 3**

**75794 Paris** 

Region

**Ile-de-France > Ile-de-France > Hauts-de-Seine**

Activity type

**Research Organisations**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 1 301 206,98

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 THIRD-PARTY 

## INSTITUT POLYTECHNIQUE DE GRENOBLE

 France

Net EU contribution

€ 60 000,00

Address

**AVENUE FELIX VIALLET 46**  
**38031 Grenoble Cedex 1** 

Region

**Auvergne-Rhône-Alpes > Rhône-Alpes > Isère**

Activity type

**Higher or Secondary Education Establishments**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

**No data**

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 THIRD-PARTY 

## INSTITUT MINES-TELECOM

 France

Net EU contribution

€ 40 000,00

Address

**19 PLACE MARGUERITE PEREY**  
**91120 Palaiseau** 

Region

**Ile-de-France > Ile-de-France > Essonne**

Activity type

**Higher or Secondary Education Establishments**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

Total cost

**No data**

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## JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION

 Belgium

Net EU contribution

**€ 164 809,86**

Address

**Rue de la Loi 200**

**1049 Bruxelles / Brussel** 

Region

**Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest > Région de Bruxelles-Capitale/ Brussels Hoofdstedelijk Gewest > Arr. de Bruxelles-Capitale/Arr. Brussel-Hoofdstad**

Activity type

**Research Organisations**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

**€ 178 000,00**

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## INSTITUT DE RADIOPROTECTION ET DE SURETE NUCLEAIRE

 France

Net EU contribution

**€ 61 164,09**

Address

**AV DE LA DIVISION LECLERC 31**

**92260 Fontenay Aux Roses** 

Region

**Ile-de-France > Ile-de-France > Hauts-de-Seine**

Activity type

## Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

**€ 68 510,00**

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### FRAMATOME

 France

Net EU contribution

**€ 106 238,90**

Address

**1 PLACE JEAN MILLIER TOUR AREVA**

**92400 Courbevoie** 

Region

**Ile-de-France > Ile-de-France > Hauts-de-Seine**

Activity type

**Private for-profit entities (excluding Higher or Secondary Education Establishments)**

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

**€ 115 231,25**

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### COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES

 France

Net EU contribution

**€ 243 322,35**

Address

**RUE LEBLANC 25**

**75015 PARIS 15** 

Region

Ile-de-France > Ile-de-France > Paris

Activity type

## Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

**€ 263 918,46**



## NUCLEAR RESEARCH AND CONSULTANCY GROUP

 Netherlands

Net EU contribution

**€ 335 872,14**

Address

**WESTERDUINWEG 3**

**1755 LE Petten** 

Region

**West-Nederland > Noord-Holland > Kop van Noord-Holland**

Activity type

**Other**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

**€ 364 301,25**



## PAUL SCHERRER INSTITUT

 Switzerland

Net EU contribution

**€ 259 301,99**

Address

FORSCHUNGSTRASSE 111

5232 Villigen Psi 

Region

Schweiz/Suisse/Svizzera > Nordwestschweiz > Aargau

Activity type

**Research Organisations**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

**€ 281 250,00**

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## KARLSRUHER INSTITUT FUER TECHNOLOGIE

 Germany

Net EU contribution

**€ 240 862,74**

Address

**KAISERSTRASSE 12**

**76131 Karlsruhe** 

Region

Baden-Württemberg > Karlsruhe > Karlsruhe, Stadtkreis

Activity type

**Higher or Secondary Education Establishments**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

**€ 261 250,00**

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## POLITECNICO DI MILANO

 Italy

Net EU contribution



€ 403 139,77

Address

**PIAZZA LEONARDO DA VINCI 32**  
**20133 Milano** 

Region

**Nord-Ovest > Lombardia > Milano**

Activity type

**Higher or Secondary Education Establishments**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 458 991,51



## POLITECNICO DI TORINO

 Italy

Net EU contribution

€ 137 308,88

Address

**CORSO DUCA DEGLI ABRUZZI 24**  
**10129 Torino** 

Region

**Nord-Ovest > Piemonte > Torino**

Activity type

**Higher or Secondary Education Establishments**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 148 931,08



## ELECTRICITE DE FRANCE

 France

Net EU contribution

**€ 119 780,13**

Address

**AVENUE DE WAGRAM 22**

**75008 Paris** 

Region

**Ile-de-France > Ile-de-France > Paris**

Activity type

**Private for-profit entities (excluding Higher or Secondary Education Establishments)**

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

**€ 129 918,64**

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## **CENTRUM VYZKUMU REZ SRO**

 Czechia

Net EU contribution

**€ 38 844,37**

Address

**HLAVNI 130**

**250 68 Husinec-Rez** 

Region

**Česko > Střední Čechy > Středočeský kraj**

Activity type

**Research Organisations**

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

**€ 42 132,25**



## UNIVERSITY OF ONTARIO INSTITUTE OF TECHNOLOGY

 Canada

Net EU contribution

**€ 0,00**

Address

**SIMCOE STREET NORTH 2000**

**L1H 7K4 Oshawa On** 

Activity type

**Higher or Secondary Education Establishments**

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

**€ 87 125,00**

**Last update:** 12 December 2024

**Permalink:** <https://cordis.europa.eu/project/id/847527>

European Union, 2025