



**"The Research and Training Programme  
of the European Atomic Energy  
Community: contribution to the  
development of safe, long-term solutions  
for the management  
of ultimate nuclear waste"**



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**DG RTD / G4 / Fission**



# COUNCIL REGULATION (EURATOM)

**No 1314/2013 of 16 December 2013 on the Research and Training Programme of the European Atomic Energy Community (2014-2018) complementing the Horizon 2020 Framework Programme for Research and Innovation**

## **General Objective of the Euratom Programme:**

- to pursue nuclear research and training activities with an emphasis on **continuous improvement of nuclear safety, security and radiation protection**, notably to potentially contribute to the long-term decarbonisation of the energy system in a safe, efficient and secure way.





## Euratom Programme 2014-2018

*Indirect actions*  
**DG-RTD**

**Fusion R&D  
Programme**

**€ 728 million**  
(45 %)

*Indirect actions*  
**DG-RTD**

**Nuclear Fission,  
Safety and  
Radiation Protection**

**€ 315 million**  
(20 %)

*Direct actions*  
**JRC**

**Nuclear Safety  
and Security**

**€ 560 million**  
(35 %)

**Total budget: € 1603 million**



# COUNCIL REGULATION (EURATOM)

**The Euratom Programme indirect actions shall have the following specific objectives:**

- (a) supporting safety of nuclear systems;
- (b) contributing to the development of safe, longer term solutions for the management of ultimate nuclear waste, including final geological disposal as well as partitioning and transmutation;
- (c) supporting the development and sustainability of nuclear expertise and excellence in the Union;
- (d) supporting radiation protection and development of medical applications of radiation, including, inter alia, the secure and safe supply and use of radioisotopes;
- (e) moving towards demonstration of feasibility of fusion as a power source by exploiting existing and future fusion facilities;
- (f) laying the foundations for future fusion power plants by developing materials, technologies and conceptual design;
- (g) promoting innovation and industrial competitiveness;
- (h) ensuring availability and use of research infrastructures of pan-European relevance.







# **WORK PROGRAMME 2014-2015**

## **Clustering of the WP 2014-2015 Actions**

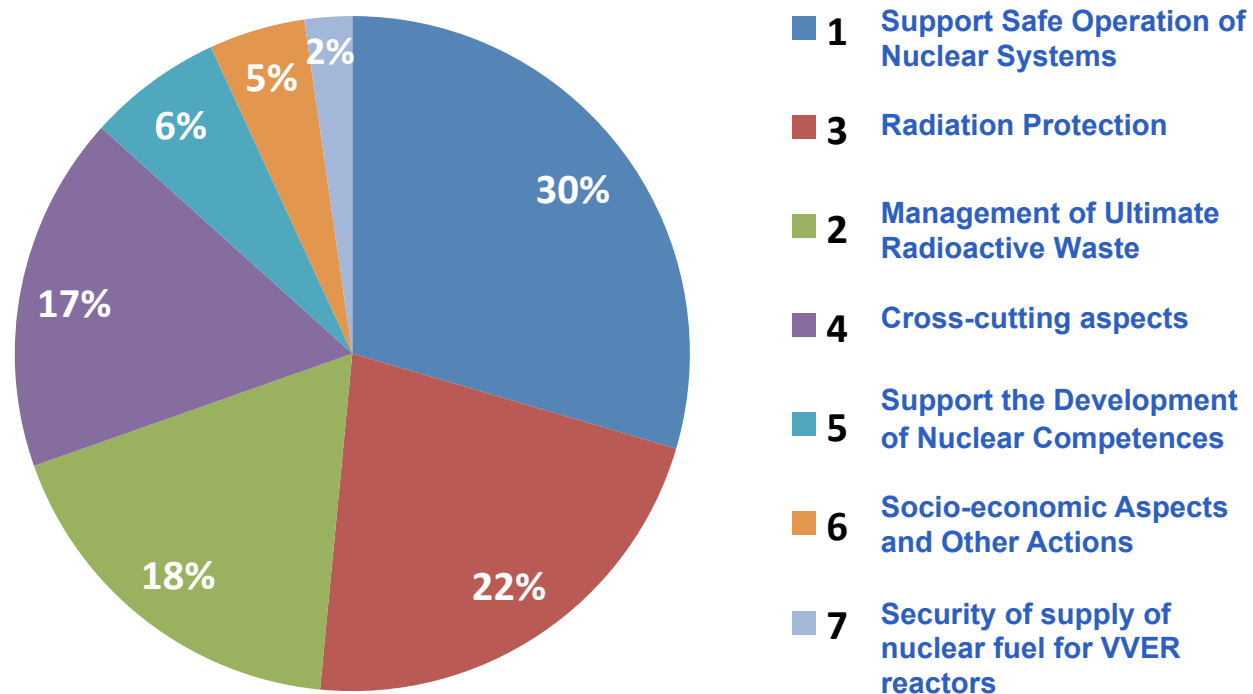
1. Support safe operation of nuclear systems
2. Contribute to the development of solutions for the management of ultimate radioactive waste
3. Radiation protection
4. Cross-cutting aspects
5. Support the development of nuclear competences
6. Socio-economic aspects and other actions



## N° of Grants per cluster

Cluster	Definition	N° of Grants per cluster	Max Grant amount (€)
1	Support Safe Operation of Nuclear Systems	7	26,643,246.75
2	Management of Ultimate Radioactive Waste	5	16,303,167.25
3	Radiation Protection	1	19,822,878.00
4	Cross-cutting aspects	2	15,383,922.23
5	Support the Development of Nuclear Competences	4	5,823,673.00
6	Socio-economic Aspects and Other Actions	3	4,151,819.00
7	Security of supply of nuclear fuel for VVER reactors	1	2,053,913.00
Total		23	90,182,619.23

## Distribution of EC grant amount per cluster





## Budget distribution per cluster and Grants

Cluster	Definition	N° of Grants per cluster	Acronyms	Max Grant amount (€)
1	Support Safe Operation of Nuclear Systems	7		26,643,248.75
			FASTNET	2,831,910.00
			INCEFA - PLUS	2,550,128.00
			IVMR	4,831,454.00
			SAMOFAR	3,466,896.50
			sCO2-HeRo	2,791,561.25
			SESAME	5,200,000.00
			SOTERIA	4,971,297.00
2	Management of Ultimate Radioactive Waste	5		16,303,167.25
			Cebama	3,868,607.25
			JOPRAD	1,100,000.00
			MIND	4,160,234.50
			Modern2020	5,997,143.00
			SITEX-II	1,177,182.50
3	Radiation Protection	1		19,822,878.00
			CONCERT	19,822,878.00
4	Cross-cutting aspects	2		15,383,922.23
			HERACLES-CP	6,387,960.23
			MYRTE	8,995,962.00
5	Support the Development of Nuclear Competences	4		5,823,673.00
			ANNETTE	2,517,399.00
			BRILLIANT	1,197,345.00
			CORONA II	1,017,605.00
			VINCO	1,091,324.00
6	Socio-economic Aspects and Other Actions	3		4,151,819.00
			HoNESt	3,052,269.00
			NUCL-EU 2020	500,000.00
			SPRINT	599,550.00
7	Security of supply of nuclear fuel for VVER reactors	1		2,053,913.00
			ESSANUF	2,053,913.00
		23		90,182,619.23



## CLUSTER 1:

Project Acronym	Project Title	Project Duration	Proj Maximum Grant Amount	Coordinator Legal Name	Country Beneficiaries of the project
<b>FASTNET</b>	FAST Nuclear Emergency Tools (FASTNET)	48	2,831,910.00	INSTITUT DE RADIOPROTECTION ET DE SURETE NUCLEAIRE	FR, AT, BE, CA, CZ, DE, DK, ES, FI, FR, IT, LT, NO, RO, RU, SE, SK, US
<b>INCEFA - PLUS</b>	INcreasing Safety in NPPs by Covering gaps in Environmental Fatigue Assessment	60	2,550,128.00	AMEC FOSTER WHEELER NUCLEAR UK LIMITED	UK, BE, CH, CZ, DE, ES, FI, FR, LT, UK
<b>IVMR</b>	In-Vessel Melt Retention Severe Accident Management Strategy for Existing and Future NPPs	48	4,831,454.00	INSTITUT DE RADIOPROTECTION ET DE SURETE NUCLEAIRE	FR, BE, BG, CZ, DE, FI, FR, HU, IT, LT, NL, PL, SE, SK, UK
<b>SAMOFAR</b>	A Paradigm Shift in Reactor Safety with the Molten Salt Fast Reactor	48	3,466,896.50	TECHNISCHE UNIVERSITEIT DELFT	NL, BE, CH, DE, FR, IT, MX
<b>sCO2-HeRo</b>	The supercritical CO2 Heat Removal System	36	2,791,561.25	UNIVERSITAET DUISBURG-ESSEN	DE, CZ, DE, NL
<b>SESAME</b>	thermal hydraulics Simulations and Experiments for the Safety Assessment of METal cooled reactors	48	5,200,000.00	AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE	IT, BE, CH, CZ, DE, FR, IT, NL, SE, SI
<b>SOTERIA</b>	Safe long term operation of light water reactors based on improved understanding of radiation effects in nuclear structural materials	48	4,971,297.00	COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	FR, BE, CH, CZ, DE, ES, FI, FR, SE, SI, UK



## CLUSTER 2:

Project Acronym	Project Title	Project Duration	Proj Maximum Grant Amount	Coordinator Legal Name	Country Beneficiaries of the project
<b>Cebama</b>	Cement-based materials, properties, evolution, barrier functions	48	3,868,607.25	KARLSRUHER INSTITUT FUER TECHNOLOGIE	<b>DE</b> , FR, BE, CH, CZ, DE ES, FI, JP, NL, RO, UK
<b>JOPRAD</b>	Towards a Joint Programming on Radioactive Waste Disposal	30	1,100,000.00	AGENCE NATIONALE POUR LA GESTION DES DECHETS RADIOACTIFS	<b>FR</b> , BE, CH, CZ, FR, UK
<b>MIND</b>	Development of the safety case knowledge base about the influence of microbial processes on geological disposal of radioactive wastes	48	4,160,234.50	SVENSK KARNBRANSLEHANTERING AB	<b>SE</b> , BE, CH, CZ, DE, ES, FI, SE, UK
<b>Modern2020</b>	Development and Demonstration of monitoring strategies and technologies for geological disposal	48	5,997,143.00	AGENCE NATIONALE POUR LA GESTION DES DECHETS RADIOACTIFS	<b>FR</b> , BE, CH, CZ, DE, ES, FI, FR, IT, JP, NL, SE, UK
<b>SITEX-II</b>	Sustainable network for Independent Technical Expertise of radioactive waste disposal - Interactions and Implementation	30	1,177,182.50	INSTITUT DE RADIOPROTECTION ET DE SURETE NUCLEAIRE	<b>FR</b> , BE, BG, CA, CH, CZ, DE, FR, HU, LT, NL, SE, SK





## CLUSTER 3:

Project Acronym	Project Title	Project Duration	Proj Maximum Grant Amount	Coordinator Legal Name	Country Beneficiaries of the project
CONCERT	European Joint Programme for the Integration of Radiation Protection Research	60	19,822,878.00	BUNDESAMT FUER STRAHLENSCHUTZ	DE, AT, BE, BG, CZ, DE, DK, EE, EL, ES, FI, FR, HR, HU, IT, LT, LV, NL, NO, PL, PT, RO, SE, SK, UK



## CLUSTER 4:

Project Acronym	Project Title	Project Duration	Proj Maximum Grant Amount	Coordinator Legal Name	Country Beneficiaries of the project
HERACLES-CP	HERACLES-CP: Towards the Conversion of High Performance Research Reactors in Europe	48	6,387,960.23	TECHNISCHE UNIVERSITAET MUENCHEN	DE, BE, FR,
MYRTE	MYRRHA Research and Transmutation Endeavour	48	8,995,962.00	Studiecentrum voor Kernenergie/Centre d'Etude de l'Energie Nucléaire	BE, BE, CH, DE, ES, FR, IT, NL, PT, SI



## CLUSTER 5:

Project Acronym	Project Title	Project Duration	Proj Maximum Grant Amount	Coordinator Legal Name	Country Beneficiaries of the project
<b>ANNETTE</b>	Advanced Networking for Nuclear Education and Training and Transfer of Expertise	48	2,517,399.00	RESEAU EUROPEEN POUR L'ENSEIGNEMENT DES SCIENCES NUCLEAIRES	<b>FR</b> , BE, CZ, DE, ES, FI, FR, IT, NL, RO, SE, SI, UK
<b>BRILLIANT</b>	Baltic Region Initiative for Long Lasting InnovAtive Nuclear Technologies	36	1,197,345.00	LIETUVOS ENERGETIKOS INSTITUTAS	<b>LT</b> , LV, LT, PL, EE, SE
<b>CORONA II</b>	Enhancement of training capabilities in VVER technology through establishment of VVER training academy (CORONA II)	36	1,017,605.00	KOZLODUY NPP PLC	<b>BG</b> , BG, CZ, DE, ES, FR, HU
<b>VINCO</b>	Visegrad Initiative for Nuclear Cooperation	36	1,091,324.00	NARODOWE CENTRUM BADAN JADROWYCH	<b>PL</b> , CZ, FR, HU, SK





## CLUSTER 6:

Project Acronym	Project Title	Project Duration	Proj Maximum Grant Amount	Coordinator Legal Name	Country Beneficiaries of the project
<b>HoNESt</b>	History of Nuclear Energy and Society	36	3,052,269.00	UNIVERSIDAD POMPEU FABRA	<b>ES</b> , BE, BG, DE, DK, EL, ES, FI, FR, LT, NL, PT, RU, SE, UK, US
<b>NUCL-EU 2020</b>	Connecting EURATOM National Contact Points in a pro-active network under EURATOM Programme in Horizon 2020	48	500,000.00	AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA	<b>IT</b> , CZ, EE, EL, PL, PT, SK
<b>SPRINT</b>	SNETP Programming for Research and Innovation in Nuclear Technology	48	599,550.00	LGI CONSULTING SARL	<b>FR</b> , BE, CZ, DE, FR





## CLUSTER 7:

Project Acronym	Project Title	Project Duration	Proj Maximum Grant Amount	Coordinator Legal Name	Country Beneficiaries of the project
ESSANUF	European Supply of SAfe NUclear Fuel	26	2,053,913.00	WESTINGHOUSE ELECTRIC SWEDEN AB	SE, BE, CZ, ES, FI, SK, UA, UK





# Radioactive Waste Management Topics 2016-2017

Addressing key priority R&I issues for the first-of-the-kind geological repositories

- *Topic NFRP 6*

Research and innovation on the overall management of radioactive waste other than geological disposal

- *Topic NFRP 7*

Pan-European knowledge sharing and development of competence in radioactive waste

- *Topic NFRP 8*



# Radioactive Waste Management Topics 2016-2017

Turn scientific consensus on geological disposal into engineering reality

## Challenges

- Demonstrate technologies and safety for underground repositories;
- Develop techniques, processes and procedures leading to waste minimization;
- Help transfer expertise and technology from the most to the least advanced Member States





# Calendar

<b>WP Publication:</b>	<b>October 2015</b>
<b>Call Open:</b>	<b>11 May 2016</b>
<b>Deadline:</b>	<b>5 October 2016</b>
<b>Evaluation:</b>	<b>November 2016</b>
<b>Info to the applicants:</b>	<b>January-February 2017</b>
<b>GAs signed:</b>	<b>May 2017</b>



**Thank you for your attention**

