



Narodowe Centrum Badań Jądrowych
National Centre for Nuclear Research
ŚWIERK

JRC collaboration partner

Program EURATOM Work Programme 2018



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Reactor MARIA, LPD

Material Physics Department
LBM

Department of Fundamental Research

Department of Nuclear Techniques and Equipment

Complexity Center
CIŚ

Radioisotope Center
POLATOM-NCBJ

Research sector in NCBJ

One of the largest research institute in Poland

1118 employees, inc. 59 prof. & 151 PhD

PhD Study: ~20 students

Scientific achievements:

~500 reviewed papers, ~10000 quotations each year

Hirsh index 141, Category A+

5th position in Poland, 4th according Cordis

SCImago „Normalized Impact”:

1st in Poland, 8th in region, 158th in the world

10th position in Nature ranking for Eastern Europe,
3rd in Poland (after UJ and UW)

International collaborations with largest laboratories in the world (CERN, DESY, Grenoble, JParc, FAIR, Julich, ESS, JINR, etc), cooperation in many universities around the world

Division of Nuclear Equipment HITEC

Science and Technology Park



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What is Euratom?



Euratom is a complementary to H2020 EC research programme for nuclear research and training.

Euratom aims to pursue nuclear research and training activities with an emphasis on continually improving nuclear safety, security and radiation protection



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Areas and organization of Euratom



Euratom focus on two areas:

- nuclear fission & radiation protection
- fusion research.

Euratom is organized in Work Programmes, each of them having 3-4 calls, containing ca. 10-15 topics.



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Euratom 2018 call areas



Euratom 2018 – defines 11 topics for 2018 in following 7 areas: Nuclear safety, Decommissioning, Waste Management, Education & Training, Radiation Protection, Innovation in safety, Fusion.



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Euratom 2018 - figures



Opening - 15 May 2018

Deadline – 27 Sep 2018

Evaluation results ~ Feb 2019

Start of projects ~ May 2019

Action type: 5 RIA, 4 CSA, IA, COFUND

Total budget 68.8 MEURO



Euratom 2018 - trends



Extension of WP to 2019-2020 planned
Goal: safe and low-carbon energy,
applications in medicine and industry
Int'l cooperation: OECD, IAEA...3rd
countries
Open research data – Data Mngmt Plan
Ethics issues



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2018 – types and sizes



Topic Nr	Type and special conditions	Budget [MEURO]	Budget per project
1	RIA, 5% for E&T	6.4	2.1 – 3.2
2	RIA, 5% for E&T	3.5	1.75 – 3.5
3	RIA, 5% for E&T	3.5	1.75 – 3.5
4	RIA, 5% for E&T	3.5	1.75 – 3.5
5	CSA	1.4	1.1 – 1.4
6	COFUND (rate 55%), grants possible	32,5	26 – 32.5
7	CSA, grants to 3rd parties possible	4	1 - 2
8	RIA, 5% for E&T, grants possible	7	5 - 7
9	CSA (restricted participation)	0.5	0.4 – 0.5
10	IA	4.5	2.25 – 4.5
11	CSA	2	1 - 2



Euratom 2018 – NFRP-1



Title: Safety assessments to improve accident management strategies for Gen II&III reactors

Challenge & Scope: Update and development of simulation tools and their validation; human reliability issues, accident management guidelines and recommendations



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Euratom 2018 – NFRP-2



Title: Model development and safety assessments for Gen IV reactors

Challenge & Scope: Safety level of Gen IV should be significantly increased, Develop models and assessment tools for expected new safety features.



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Euratom 2018 – NFRP-3



Title: Research on the safety of Light Water Small Modular Reactors

Challenge & Scope: Investigate safety of SMRs, provide set of technical specifications to test compliance with EC Directives; develop methodology of testing for safety regulators



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Euratom 2018 – NFRP-4



Title: Improved nuclear data for energy and non-energy modelling applications

Challenge & Scope: provide reliable data and IT tools for simulations, Data Banks, assistance in benchmarking, etc.

Concerted effort of new data measurements, dedicated benchmarks and modelling should increase accuracies



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Euratom 2018 – NFRP-5



Title: Development of the roadmap for decommissioning research

Challenge & Scope: Dismantling techniques exist, but how to do it safely and cost-effectively? Prepare roadmap/strategy for decommissioning research, identify needs, techniques...



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Euratom 2018 – NFRP-6



Title: European Joint Research Programme (EJP) in the management and disposal of radioactive waste

Challenge & Scope: start of first geological facilities for high level waste, establish EJP, COFUNDED by Euratom



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Euratom 2018 – NFRP-7



Title: Availability and use of research infrastructures for Education, training and competence building

Challenge & Scope: availability of trained staff is at risk (retirement, lack of interest among youth). Scheme to support access to equipment and research facilities for students, researchers and technicians.



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Euratom 2018 – NFRP-8



Title: Radiation protection research
Challenge & Scope: Better and close cooperation of CONCERT and MEDIRAD. Quality gap analysis during evaluation; Research in biology, epidemiology, dosimetry, emergency preparedness, radioecology, public engagement.



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Euratom 2018 – NFRP-9



Title: Strategy for the exploitation of Euratom research results in radiation protection

Challenge & Scope: Lack of systematic assessment of the use of results of funded projects. Identify, analyse and monitor how results are used and capitalized by various stakeholders



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Euratom 2018, NFRP-10



Title: Encouraging innovation in nuclear safety

Challenge & Scope: 50+ years of Euroatom research and legislative effort. Support of technology transfer to industry, prototyping, demonstrating, piloting...



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Euratom 2018, NFRP-11



Title: Open data access (ODA) for fusion research

Challenge & Scope: ODA soon a requirement for H2020. No easy access to data from different experiments.

Assessment of ODA requirements, recommendations of technical approaches, develop tools for ODA



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2018 – other actions



- **Training & Information for Ukraine**
- **SOFT Innovation Prize (fusion)**
- **Contribution to GIF**
- **Support to Fisa Conference**
- **Management of IPR**



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Participation of Polish organizations in Euratom 2014-2018 (MAINLIST)

Organization	Nb of participations in the projects (MAINLIST) Received/Applied	EC Contribution (MAINLIST) [kEuro] Received/Applied
NCBJ	8/16	1 340 / 4 677 k€
ICHTJ	3/11	265 / 1 273 k€
POLITECHNIKA WARSZAWSKA	2/3	239 / 417 k€
IPPT PAN	1/1	79 k€
PROCHEM SA	1/2	98 / 165 k€
Grupa Azoty S.A.	1/1	121 k€
GIG	1/1	12 k€
Energoprojekt-Warszawa SA	1/1	122 k€
INSTYTUT MEDYCZYNY PRACY	1/1	23 k€
IFPILM (Consortium)	1/1	2 192 k€
Total Poland	20/50	4 508 / 10 471 k€
Total EU	854/1968	651 446 / 955 359 k€

(Source: E-Corda v8, **after 358 calls, 31.5.2017**, done by NCP, does not include ongoing FP7 projects)

Participation of EU28 countries in Euratom 2014-2018 (Poland on position 11 by received EC funding)

Country	Number of participations in applications	Number of funded participations	Success rate	Applied EC contribution	Received EC contribution	Success rate
Germany	243	109	44,86%	538 443 706,77 €	493 416 511,69 €	91,64%
France	314	162	51,59%	95 802 712,42 €	50 372 553,90 €	52,58%
Belgium	136	70	51,47%	46 417 454,44 €	23 637 544,71 €	50,92%
United Kingdom	164	80	48,78%	43 239 269,53 €	16 254 742,53 €	37,59%
Spain	113	57	50,44%	24 362 822,88 €	9 846 582,75 €	40,42%
Sweden	113	38	33,63%	33 596 229,50 €	9 443 762,25 €	28,11%
Finland	79	34	43,04%	24 873 343,70 €	8 435 699,25 €	33,91%
Italy	117	44	37,61%	25 855 140,27 €	7 771 491,46 €	30,06%
Czech Republic	132	49	37,12%	29 668 212,63 €	6 746 328,75 €	22,74%
Netherlands	62	25	40,32%	17 526 515,30 €	6 625 664,55 €	37,80%
Poland	50	20	40,00%	10 471 177,25 €	4 507 524,03 €	43,05%
Hungary	46	16	34,78%	7 344 294,25 €	2 149 004,50 €	29,26%
Slovenia	36	11	30,56%	6 255 522,75 €	1 541 639,25 €	24,64%
Slovakia	32	10	31,25%	5 822 069,34 €	1 177 300,00 €	20,22%
Lithuania	32	12	37,50%	2 939 209,55 €	1 063 601,00 €	36,19%
Portugal	11	7	63,64%	1 247 185,00 €	963 732,00 €	77,27%
Greece	11	5	45,45%	1 523 233,00 €	915 313,00 €	60,09%
Austria	12	6	50,00%	2 944 464,00 €	863 116,00 €	29,31%
Romania	46	19	41,30%	4 608 173,93 €	556 493,33 €	12,08%
Bulgaria	18	7	38,89%	2 291 645,50 €	517 659,00 €	22,59%
Denmark	6	3	50,00%	1 433 291,25 €	311 460,00 €	21,73%
Estonia	8	3	37,50%	999 629,00 €	278 489,00 €	27,86%
Croatia	9	4	44,44%	950 798,00 €	253 627,00 €	26,68%
Latvia	2	2	100,00%	183 775,00 €	183 775,00 €	100,00%
Ireland	2	1	50,00%	163 264,75 €	46 848,75 €	28,69%
Cyprus	2	1	50,00%	107 875,00 €	23 625,00 €	21,90%
Luxembourg	4	0	0,00%	1 687 781,25 €	0,00 €	0,00%
Suma EU	1968	854	43,39%	955 359 360,05 €	651 446 306,24 €	68,19%

NCBJ – RESEARCH PROJECTS



29 NCN grants

8 NCBiR grants

16 projects: Ministry of Science and Higher Education

14 projects from H2020

2 COST projects

1 infrastructure project CERAD (Polish Scientific Infrastructure Roadmap)

10 other projects (CERN, IAEA etc.)

NCBJ in H2020:

applications: 22

15 – not approved for funding

success rate: 32%

NOMATEN Teaming Phase 1

7 – funded (1 coordination)

grant IAEA (~180 kEU) to build CyberSecLab.

Project CERAD - Polish Research Infrastructure Road Map (25 M€)

Total in 2017: 180 different types of projects



Project Development at NCBJ



Two special units at NCBJ for:

– **Project Preparation** - 4 persons who help to Find suitable call and Write proposal (administrative parts, implementation, budgets); Validate; Submit; Perform formalities (GA, CA's...)

H2020+Euratom success rate = 32%

(in last EURATOM call even 5/7 = 71%)

- **Project Administration**: time-sheets, payments, bookkeeping, reporting

EURATOM activities in partnership with NCP-PL,
e.g. Information activities Info-Days, Brokerage Days



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Project Development at NCBJ

Two special units at NCBJ for:

– **Project Preparation** - 4 persons who help to Find suitable call; Write proposal in required format (using internal and external consultants), in particular: administrative parts, implementation, budgets; Validate proposal before submission; Perform starting formalities (contract negotiations, GA & CA's, all paperwork)

H2020+Euratom success rate = 24%

(in last EURATOM call even 5/7 = 71%)

- **Project Administration:** time-sheets, payments, bookkeeping, reporting

EURATOM activities in partnership with NCP-PL, e.g.

Information activities Info-Days, Brokerage Days

Dziękuję za uwagę.



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