



EaP Plus Information Day - Ukraine

Національний центр ядерних досліджень в якості учасника програми H2020

Jacek.Gajewski@ncbj.gov.pl

**International Projects Coordinator
LEAR and Chief Project Officer of NCBJ**

NCBJ, Poland



NCBJ in figures

- **60 years of successful research**
- **1100 employees, 70 professors, 120 PhDs, 3 sites, Production @ POLATOM and HITEC**
- **High level of scientific excellence: Hirsch index ~122, 5th place in PL (including Universities and Academy), Category A**
- **Cooperation with 40+ countries, e.g. CERN, DE: DESY & FAIR, FR: GANIL & CEA, JP: JPARC**
- **Participation in LHC(CMS,LHC-b), Contribution to LINAC4, GBAR, XFEL, W-7X, ESS (Lund), JHR (Cadarache), NICA (Dubna)**



International Cooperation

- **Goals: access to research infrastructures, cooperation with leading scientific centres, training of young researchers, regional coordination (V4, Baltic)**
- **Participation in 38 int'l projects, currently 14 H2020 (2 coordinations, 8 EURATOM, 5 H2020, 15 FP7) + TEAMING-WIDENNING**
- **Conferences & workshops (~5/year)-JRC@Kiev**
- **Participation in governing and program bodies, platforms (17 experts, EURATOM PC, JRC)**
- **Two special departments to support scientists: Project preparation, Project accounting&reports**



Research & Int'l Cooperation Dept.

- Special Unit of NCBJ – 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)
 - Rate of success = 24% (EURATOM 5/7 = 71%)
- EURATOM activities in partnership with NCP-PL**
- Information activities Info-Days, Brokerage Days



Current regional projects - VINCO

- **VINCO (PL, CZ, HU, SK) + FR = Visegrad Initiative for Nuclear Cooperation = capacity building activities aiming at coordinating Gen IV reactor research, with specialization:**
 - **VUJE – reactor design and safety analyses,**
 - **UJV – cooling systems development,**
 - **MTA – fuel laboratory**
 - **NCBJ – structural material laboratory.**
 - **Close collaboration with CEA France, a European leader in nuclear technologies.**

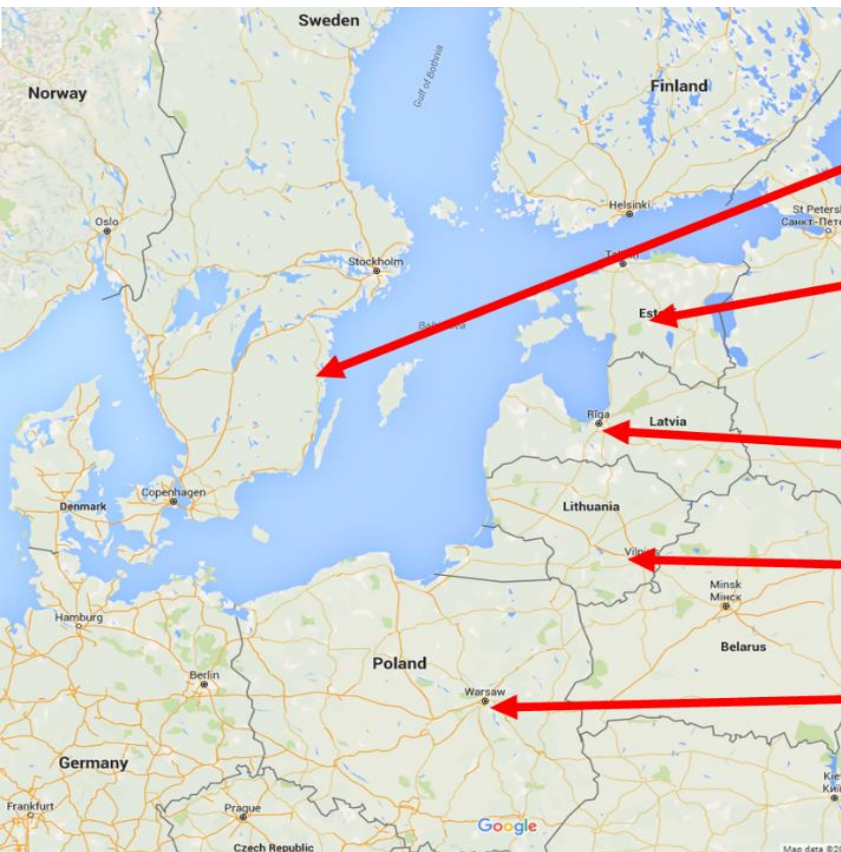


Current regional projects - BRILLIANT

- **BRILLIANT (LT, EE, LV, PL) + SE =**
 - **Barriers for NP development in Baltic region**
 - **R&D capacity building,**
 - **Cooperation on nuclear waste and fuel cycle,**
 - **NPP integration in small power systems,**
 - **NP influence on security of energy supply,**
 - **Macroeconomic impact of nuclear programs.**
- In Particular NCBJ leads WP1, which will develop:**
- A concept of „EUROBaltic Research Institute”**



EUROBaltic Research Institute



Baltic center of Nuclear Fuel Studies - Oskarshamn

Baltic Center of Nuclear E-education - Tartu

Baltic Center of (Nuclear) Coolant Technology Development - Riga

Baltic Center of Nuclear Safety and Energy Security - Vilnius/Kaunas

Baltic Institute of Nuclear (Power) Research - Swierk



NFRP 2 - V4F4 Safety of gas cooled Reactors

**NFRP 4 (Coordination)– GEMINI+ Nuclear
cogeneration**

**NFRP 4 - NARSIS - Small, Efficient And Safe
Operation of Nuclear Reactors**

NFRP 5 - GEMMA - GEnIV Materials Maturity,

**NFRP 10 (Coordination)– EURROFORCE -
European Research Reactor Force**

**NFRP 11 – FOREVER - high density fuel
technologies: UMo or U_3Si_2**

NFRP 13 - M4F – Materials for Fusion



Where workprogrammes come from?

FP4,5,6 – bottom-up approach:

- **EU funded projects proposed by scientists**

FP7, H2020 – top-down approach

- **Workprograms are created „on request” by:**
 - **member states (ministries)**
 - representatives in the Program Committee
 - **technology platforms**
 - e.g. Sustainable Nuclear Energy Technology Platform



When workprogramme is ready ...

- **Workprogramme contains <20 topics**
- **Typically 1-4 projects per topic are allowed**
- **Usually, large pan-european consortia are formed for each topic**
- **In practice, once workprogramme is announced, consortia are already formed**
- **Only those have chance, who have international collaboration before the call is launched, e.g. via participation in technology platforms**



Sustainable Nuclear Energy Technology Platform

www.snetp.eu

Grown from 35 to >100 EU organisations

Industry:



Research / Engineering:



Academia:



Technical Safety Organisations:



Non-governmental Organisations:

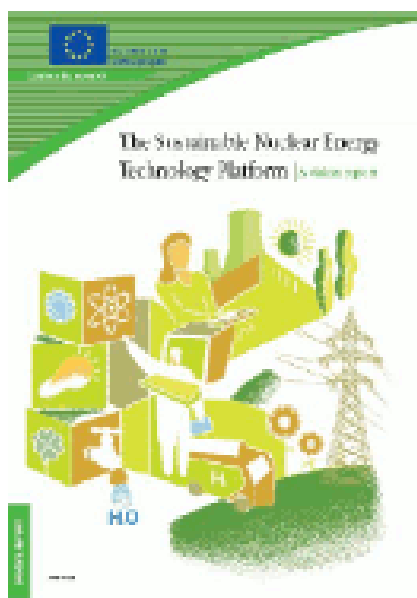


Others:





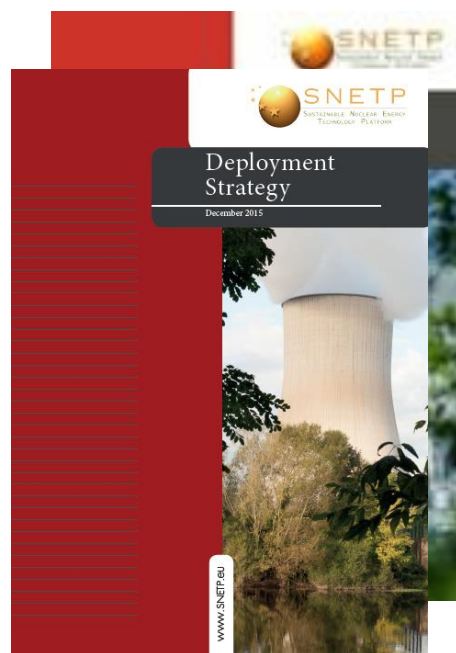
SNE-TP strategy documents



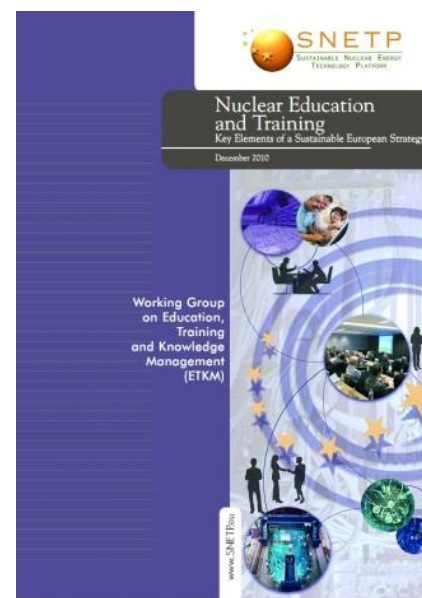
Vision Report
2007



**Strategic Research
Agenda**
2009 / 2013



**Deployment
Strategy**
2010 / 2015



**Education
& Training**
2010

SRA Annex: Thorium cycles and Thorium as a nuclear fuel component - 2011
SRA Annex: Molten Salt Reactors – 2012

Download: www.snetp.eu

Prints: <secretariat@snetp.eu>



Specific EURATOM PM issues

- **Both research and networking are more difficult due to high security and safety requirements, which differ from country to country**
- **Different „safety cultures” among different nations -> tensions among partners**
- **Limited number of industrial partners, especially SMEs -> communities are small**
- **Research vs. Business balance (Mo-99 case)**
- **Nuclear power is political and unstable issue + low public awareness -> dissemination and sustainability are sometimes difficult**



Thank You!

NCBJ вітає молодих вчених і PHD студентів з України!

You may contact me at:

Jacek.Gajewski @ ncbj.gov.pl