

National Centre for Nuclear Research in Poland



INPRO Dialogue Forum on International Collaboration on Innovations to Support Globally Sustainable Nuclear Energy Systems

IAEA, Vienna, Austria

18–21 November 2014

Driving forces of collaboration on innovation – Plenary Session 1

T. Jackowski

Morning session

Three papers presented during morning session supplied the information concerning programs and actions taken in the frame of following organisations:

1. European Commission
2. WANO
3. IAEA Division of Nuclear Installations Safety

Georges Van Goethem - EURATOM

- Very comprehensive information concerning European research programs and its financing being the base of collaboration for innovation in Europe
- Knowledge triangle
 - Research
 - Innovation
 - Education
- Research & Training
- Stress tests after Fukushima

Georges Van Goethem – EURATOM cont.

- Implementation of Basic Safety Standards
- Emergency preparedness
- Regulator & TSO – MELODI
- Stakeholders – ENEF
- Research & Innovation – SNETP, IDGTP
- Safety culture – Ethical framework
- Load follow nuclear in connection with renewables
- Radiation Protection culture

Mikhail Chudakov - WANO

WANO role in the collaboration for innovation and in the nuclear safety improvement. Research of idea how to reinforce collaboration taking into account the deficiencies shown during and after Fukushima accident

- 1979 – TMI2 – INPO
 - 1986 – Chernobyl – WANO
 - 2011 – Fukushima - ???
1. Extend the scope of WANO to design & accident management
 2. To set up an event response strategy
 3. To increase credibility
 4. Transparency – reports to public
 5. Internal consistency between 4 regions

James E. Lyons – IAEA NINS

The first common approach to the modification of licencing proces for new reactor technologies. Very important example of the collaboration for innovation. It will be useful to include regulators and TSOs from countries working on the implementation of new technologies.

- Creation of SMR Regulators Forum in mid 2012
- Consultancy meetings:
 - Dec 2012
 - Feb 2014
 - July 2014
- Member States Involved: Canada, China, Finland, France, Germany, India, Korea, Russian Federation, UK, USA

James E. Lyons – IAEA NINS – cont.

- Regulator or indicated TSO
- Regulatory framework for modular and more innovative designs/concepts
- Use of MDEP concept for the evaluation of new technologies

Afternoon session

- Four papers presenting different aspects of limitations concerning implementation of innovations
- Limitations protecting the durability and interests of innovatives projects

John Arthur Day – Sellafield Ltd.

Collaboration for innovations in the area of decommissioning technologies and its limits connected with IPR

- Knowledge sharing and collaboration for innovation
 - Knowledge preservation by the long term transfer before retirement
 - Decommissioning technology transfer with IPR preservation

Khaliq Muhammad – IAEA Division of Nuclear Security

Very good description of IAEA activities in the area of international collaboration for innovations in security. Main limitation is the problem of information protection.

- Basic Security Standards
- Security culture
- Larger scope than physical protection
- Protection against sabotage
- Computer network security

Natalya Belenkaya - Rosatom

A comprehensive information concerning Rosatom activities with special emphasis on commercial success of Russian reactor technologies and on international collaboration for innovation through Rosatom research centers.

- International collaboration
- Partnership agreements
- IPR preserved in agreements
- Innovative Projects
- 160 MoU signed with different partners

Katie Strangis US DoE NISA

A comprehensive information about the limits in collaboration for innovation in reactor technologies resulting from the protection of sensitive information

- US export control
 - Clear division of tasks between DoE and NRC
 - DoE NISA – protection of US technologies
 - Safeguard limitations
 - Bilateral agreements facilitating export control procedures

Conclusions

- Presentation of main actors influencing the collaboration for innovation.
- Reinforcement of collaboration and its limits.
- There is no possibility to develop new reactor technologies without strong collaboration and clear principles of intellectual property protection.