

INTERNATIONAL PROJECT ON INNOVATIVE NUCLEAR REACTORS AND FUEL CYCLES (INPRO)

Plenary Session 4 on the Topic:

***Collaboration between technology users, technology holders
and other organizations on the infrastructure and institutional
arrangements necessary for the development and
deployment of sustainable NESs***

Chairperson: Mr Taswanda TARYO

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IAEA

International Atomic Energy Agency

- Adrian RIZEA (Romania, Center of Technology and Engineering for Nuclear Projects, Director), **Role of TSO's Organizations in Romania**
- Javier DIES (Spain, Technical University of Catalonia (UPC), BarcelonaTech, Professor Chair in Nuclear Engineering)
European Master in Innovative Nuclear Engineering - Educating Students for Advanced Nuclear Technology
- Peter Paul DE REGGE (Belgium, Consultant)
International Collaboration between Technology Developers, Users, and Universities for Training Programmes related to GEN IV Nuclear Energy Systems
- John DE GROSOIS (IAEA, Nuclear Knowledge Management Section, Section Head), **KM in Nuclear R&D and Innovation**
- Edward BRADLEY (IAEA, Research Reactor Section, Section Head),
The IAEA designated International Centre based on Research Reactor (ICERR) Scheme.

- Taswanda TARYO (Indonesia, National Nuclear Energy Agency (BATAN), Deputy Chairman for Nuclear Energy Technology), **Development of Indonesian Experimental Power Reactor Program: An Approach to Innovative R&D, Nuclear Co-generation and Public Acceptance**
- Matthew Cole VAN SICKLE (IAEA, Nuclear Infrastructure Development Section, Nuclear Engineer), **Regional Cooperation in the Development of Nuclear Infrastructure**
- Doan Phac LE (Viet Nam, Viet Nam Atomic Energy Agency (VAEA), Deputy Director General), **Collaboration on the Research & Development Capacity Building in Viet Nam.**
- Nikolay ARKHANGELSKIY (Russian Federation, The State Atomic Energy Corporation “Rosatom”, Advisor), **ROSATOM approaches for sustainable development of scientific cooperation: MBIR International Research Center**
- Margaret HARDING (United States of America, 4 Factor Consulting, Consultant to U.S. Department of Energy), **U.S. Industry perspective on export control and non-proliferation issues**

Key points, major observations and recommendations (cont'd)



- Collaboration made based on mutual benefit agreement,
- IP is a must to drive innovation and fruitful collaboration, but may resist other or mankind to get benefit of innovation.
- Export control to prevent dual uses material going to bad actor also may slow down development and deployment of sustainable NES.
- KM must be developed to avoid risk of lost of knowledges and other related things.

- Sharing knowledges, specialized Laboratories and testing facilities is a key point to achieve maximum benefit on collaboration
- Closed collaboration between technology holder and technology user especially embarking NPPs is believed to accelerate sustainable NES among countries
- IAEA plays main role as facilitator and mediator bridging collaboration among the member states.

Key points, major observations and recommendations (cont'd)



- Developing national capacities for strategic energy planning and harnessing innovations
- Improve interactions between established technology users and embarking-country users
- Collaboration on increasing licensing and regulatory assurance and support
- Harmonisation of licensing and safety requirements
- Training of human resources to increase regional capacity building
- Improving awareness of specific innovative technology options to overcome barriers for their adoption.

Conclusions/Recommendations

- All countries shall need a better understanding of regional and global development scenarios to foster collaboration for sustainable NES,
- It is necessary to promote the value added by collaboration to improve governmental and public trust and support in nuclear energy,
- Political decision to pursue nuclear energy is key to promoting collaborative processes,
- Effective IP regulation must be developed by parties involved in collaboration hence gaining benefit of the collaboration
- IAEA plays main role as facilitator and mediator to bridge collaboration among the member states.

**THANK YOU FOR
YOUR ATTENTION !!!**