

EXHIBITION OF EQUIPMENT AND SERVICES

A limited amount of space will be available for commercial exhibitors' displays/exhibits during the conference. Interested parties should contact the Scientific Secretariat.

REGISTRATION

There is no registration fee. Please see the conference web page for the participation form and details for submission.

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International Conference on Opportunities and Challenges for Water Cooled Reactors in the 21st Century

Vienna, Austria, 27–30 October 2009



Painting by Jernita C. Shi, Aged 10

Organized by the



IAEA

International Atomic Energy Agency

In cooperation with:

EC Joint Research Centre (EC/JRC)

International Electrotechnical Commission (IEC)

OECD Nuclear Energy Agency (OECD/NEA)

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Conference Web Page

<http://www-pub.iaea.org/MTCD/Meetings/Announcements.asp?ConfID=35251>

BACKGROUND

Water cooled reactors (WCRs) have been the keystone of the nuclear industry since the 20th century. As we move into the 21st century and face new challenges such as the threat of climate change and the large growth in world energy demand, nuclear energy has been singled out as one of the sources that can contribute substantially to meeting energy needs in a sustainable way.

A systematic approach and the experience of many years of successful operation have allowed the nuclear community to develop safer, more efficient and more reliable nuclear reactor designs, and to optimize plant availability and cost through improvements in maintenance programmes, and operation and inspection practices.

As the nuclear community worldwide looks to the future with the development of advanced and innovative reactor designs and fuel cycles, it becomes important to explore the role that WCRs will play in this future.

OBJECTIVES

The objectives of the conference are to:

- Provide a forum for the exchange of information among those interested in the introduction or expansion of nuclear power programmes in the 21st century;
- Explore the status and trends in the development of advanced water cooled reactors designs, for both electrical and non-electrical applications;
- Discuss the trends in nuclear power plant design and safety and their anticipated impact on the required capabilities of operating, regulatory and technical support organizations;
- Discuss the role of operation and maintenance optimization programmes in assuring safe, and reliable nuclear power plant operations;
- Explore the future role of WCRs, as a bridge to the use of innovative nuclear reactor designs and fuel cycles.

TOPICS

Challenges and Opportunities to Launch New Nuclear Power Programmes

- Infrastructure and other considerations for launching a new nuclear power programme;
- Current nuclear power performance and outlook in different Member States;
- Environmental concerns and constraints in national energy policies.

Design and Construction of Advanced Water Cooled Reactors

- Trends in advanced water cooled reactor design and technology;
- Safety objectives and utility requirements for advanced water cooled reactors;
- Advanced construction technologies and management approaches.

Safety and Performance Achievement in Existing Water Cooled Reactors

- Operational experience: Feedback, analysis and lessons learned;
- Optimized maintenance programme;
- Plant uprating, safety enhancements and performance improvements.

Innovative and Advanced Applications of Water Cooled Reactors

- Transition to future nuclear systems: Fast breeder reactors, Generation IV reactors;
- Application of advanced monitoring, diagnostic and prognostic systems;
- Non-electrical application of WCRs, such as desalination and district heating.

PROGRAMME STRUCTURE

To facilitate achieving the objectives, the conference will be structured as follows:

- Plenary sessions;
- Technical sessions;
- Panel sessions.

AUDIENCE

Those attending the conference are expected to include:

- Senior policy makers at the ministerial level, government officials, representatives of regulatory bodies and technical experts;
- Representatives of operating organizations responsible for various technical and management aspects of current nuclear power plant projects, and for planning and implementing new nuclear power plant projects;
- Management and experts from nuclear power plant design and research organizations, and from organizations involved in the development of fuel cycles for WCRs.

LANGUAGE

The conference will be held in English.

KEY DEADLINES

15 April 2009

- Submission of extended synopsis (electronic version – 800 words)
- Paper Submission Form (Form B)
- Grant Application Form (Form C)

10 September 2009

- Submission of full paper