

International Conference on Opportunities and Challenges for Water Cooled Reactors in the 21st Century, 27- 30 October 2009

VIC, M Building, IAEA Board Room

Opening Remarks

By

Mr. Yury A. Sokolov, Deputy Director General,
Head of the Department of Nuclear Energy

Dear Distinguished guests, Ladies and Gentlemen.

Good morning!

On behalf of the International Atomic Energy Agency, I would like to welcome you to this important international Conference on Opportunities and Challenges for Water Cooled Reactors in the 21st Century.

First, I would like to express our sincere appreciation to the European Commission, the OECD Nuclear Energy Agency, the World Nuclear Association and the International Electrotechnical Commission for their cooperation and the assistance provided in the organization of this conference.

Challenges and opportunities, like the poles of a magnet, do not exist separately. Furthermore, what some perceive as an opportunity may be a challenge for others, and a challenge today will probably become an opportunity tomorrow. All these complexities are fully applicable to the nuclear industry and its future.

Water Cooled Reactors have been the keystone of the nuclear industry in the 20th Century. As we move into the 21st Century and face new challenges such as the growth in world energy demand or the threat of global climate change, nuclear energy has been identified as one of the sources that could substantially and sustainably contribute to power the world.

Many projections forecast significant growth in the use of nuclear energy both in countries currently taking advantage of it and in countries considering its use for the first time. As we look into the future with the development of advanced and innovative reactor designs and fuel cycles, it seems clear that Water Cooled Reactors will play an important role in the future too.

In recent times, there has been a two prong approach on the expansion of nuclear power.

- On one hand, countries with existing nuclear power programmes have made a large effort towards making the most of their current nuclear assets by capitalizing in many years of operational excellence, as well as by extending and optimizing their operational life.
- On the other hand, and despite these life management efforts, there is a clear need to eventually replace current nuclear capacity and also to meet increased energy demand in an environmentally sound manner by building new nuclear power plants.

These interests have motivated both countries with existing nuclear programmes and newcomer countries to consider the construction of new nuclear power plants in the 21st century, taking into account the desire to build capacity in terms of human resources, energy planning, regulatory capabilities and other infrastructure.

Great attention is also directed toward making new plants simpler to operate, inspect, and maintain, thus increasing their safety and overall cost effectiveness . To support the future role of water cooled reactors, substantial design and development programmes are underway in a number of Member States to incorporate additional technology improvements into advanced nuclear power plants designs.

A systematic approach and the experience of many years of successful operation have allowed designers to focus their design efforts and develop safer, more efficient and more reliable designs, and to optimize plant availability and cost through simpler operation and improved maintenance programs.

This approach has also been successfully used for the optimization of all aspects of operation in currently operating plants, as their efficient and safe operation is a key factor in assuring that nuclear power will meet both the current and the future energy needs.

It is also important to establish a forum to facilitate the exchange of information on building infrastructure, operational excellence and the sustainable deployment of advanced reactors because many of water cooled reactors will be built in countries with no previous nuclear power experience. IAEA has organized continuously international conferences or symposia on the operation and maintenance of existing nuclear power plants and on the development of advanced water cooled reactor technologies.

A total of 133 papers will be presented at this conference, of which 66 papers will be presented orally, with the remaining papers displayed here as poster

presentations. The IAEA invited 18 high level keynote speakers to cover a broad range of topics from current nuclear power outlook to advanced applications of water cooled reactors. More than 260 participants are registered, representing 54 Member States and 4 international organizations.

This conference is significantly larger than previous conferences in this area, a clear indication of the growing importance we all assign to this topic. This conference has considerably exceeded our initial expectations with regards to not only the number of participants, but most importantly with regard to the broad range of topics and contributors.

In addition, 15 companies participate in the technical exhibitions.

- As main suppliers, Atomic Energy of Canada Limited (AECL) from Canada, Areva-NP from France, Hitachi-General Electric(GE), Mitsubishi Heavy Industries (MHI), Toshiba from Japan, Hidropress from the Russian Federation, Korea Hydro & Nuclear Power Corporation from Republic of Korea, Westinghouse from USA will display their advanced reactor design concepts
- Some designers and engineering support companies, Analysis and Measurement Services Corporation (AMS) and NUScale power from USA, Center of Material Science and Lifetime Management Limited (CMSLM) from the Russian Federation, Institute for Nuclear Technology (INETEC) from Croatia, and FBNR from Brazil will also showcase their technologies and
- Two international organizations, International Electrotechnical Commission (IEC) and Sustainable Nuclear Energy Technology Platform (SNETP) from EC also will introduce their activities.

I really appreciate their contributions and participation in the technical exhibitions.

I firmly believe that through this conference we will be able to contribute to the worldwide exchange of lessons learned from our operational and regulatory experiences, and that this sharing will play a critical role in ensuring the success of future nuclear power development around the world.

Also, some of the discussions we will have this week will provide guidance for water cooled reactors to evolve and adapt to meet the needs of the future, and to become the bridge towards promising future nuclear technologies that are not commercially feasible yet, such as innovative nuclear systems.

We hope you will make recommendations concerning priorities for future work to be performed by utilities, vendors, regulatory authorities and research institutions around the world, as well as here, by the IAEA. We also expect that as a result of this conference, international cooperation will be strengthened, and a culture of active sharing and learning will be promoted.

I wish all of you success during the conference and thank you for your important contributions.

Ms. Basma Shalaby, has kindly agreed to serve as president of this conference. I now declare this meeting open and turn it over to the conference president.

Dear Basma, you have the floor. Thank You