

Agneta RISING

**DIRECTOR GENERAL OF
WORLD NUCLEAR
ASSOCIATION**



WORLD NUCLEAR ASSOCIATION

World Nuclear Association is an international organization that represents the nuclear industry around the world.

What are the main objectives of the organization that you have been heading since 2013?

World Nuclear Association's mission is to promote a wider understanding of nuclear energy among key international influencers by producing authoritative information, developing common industry positions, and contributing to the energy debate.

World Nuclear Association is the only industry organisation with a global mandate to communicate about nu-

clear energy. We are in a unique position to share and advance best practice and common messages globally.

What entities can be members of World Nuclear Association and what requirements must they meet to join the organization?

Our membership is open to all companies that are either active in or working to support the nuclear industry.

Our members are responsible for virtually all of world uranium mining, conversion, enrichment and fuel fabrication; all reactor vendors; major nuclear engineering, construction, and waste management companies; and most of the world's nuclear generation. Other members provide interna-

tional services in nuclear transport, law, insurance, brokerage, industry analysis and finance.

We continue to expand our membership, particularly in non-OECD countries where nuclear power is produced or where this option is under active consideration. Already our members are located in countries representing 80% of the world's population.

What is the operating structure and what are the main activities that the World Nuclear Association has in progress?

World Nuclear Association Members appoint the Director General and elect a Board of Management. The



World Nuclear Association's Director General is Agneta Rising. The Chair of the Board is Helmut Engelbrecht. Our Board of Management fulfils all statutory duties pertaining to the organisation's governance, sets policies and strategic objectives acting on proposals from the Director General.

All of our activities revolve around three strategic areas:

- 1: Nuclear Industry Cooperation: We act as a global forum and business meeting place for leaders and specialists representing all aspects of the nuclear industry. We provide a vehicle for members to shape joint positions that are relevant to nuclear, on economic, safety, and environmental issues through our Working Groups. We represent the industry in key world forums that influence the nuclear industry's regulatory and policy environment. We also work in collaboration with the IAEA, WANO, and the OECD Nuclear Energy Agency to enhance nuclear education and build nuclear leadership, through the World Nuclear University.
- 2: Nuclear Information Management: We provide trustworthy and easily accessible information on nuclear power via our website, which serves as the world's most comprehensive nuclear information source, and via World Nuclear News, the leading online news service on developments related to nuclear power.
- 3: Nuclear Energy Communication: With a goal to increase global support for nuclear energy among key stakeholders, our role is to represent the nuclear industry's interests where the energy debate is taking place. By coordinating on key messages with our partners, we deliver targeted information to decision-makers and influencers, including the media and international organisations that have an interest in energy-related issues.

With what other international institutions does World Nuclear Association collaborate?

World Nuclear Association works alongside other organisations: the International Atomic Energy Agency (IAEA), the inter-governmental body for technical and scientific cooperation in nuclear energy; the World Association of Nuclear Operators (WANO), the industry's reactor safety organisation; and other regional and nation-

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al nuclear associations around the world.

We also work with key international institutions, such as the World Energy Council, the International Commission on Radiological Protection (ICRP), and the International Chamber of Commerce.

THE UNIVERSITY: A STAKE IN THE FUTURE

Information on nuclear energy and the energy debate are two key aspects of the World Nuclear Association Mission.

What role does the WNU (World Nuclear University) play in achieving these objectives?

The World Nuclear University (WNU) is a worldwide network of educational and research institutions engaged in peaceful uses of nuclear energy.

WNU offers a range of unique nuclear educational and training programmes around the world, organised by the WNU Coordinating Centre in joint collaboration with members of the WNU network. By drawing on the support of industry, governments and academia, these programmes are designed to meet the training requirements of international nuclear professionals, particularly in the area nuclear leadership. As of June 2016, almost 5000 participants from over 80 countries have attended WNU programmes.

By providing a broader understanding of the nuclear industry and the key issues it faces participants in WNU courses are better able to engage in dialogue and communicate on the role of nuclear in meeting the global need for clean and reliable energy.

What profile should candidates have to study at the University?

The main course of the World Nuclear University, the WNU Summer Institute, is designed to expand participants' horizons across the full spectrum of

issues surrounding nuclear energy. We welcome a broad range of applicants from around the world, whether they are from a large nuclear company or from one of the emerging nuclear countries.

Applicants must provide evidence of meeting the following requirements:

- Currently employed in the nuclear sector, with at least 3 years of relevant work experience;
- Advanced University degree (Master degree or equivalent 4 years of work experience) in nuclear energy sciences related field;
- Demonstrated academic or professional excellence and leadership potential with two recommendation letters;
- Maximum age of 40;
- Proficiency in English, particularly oral communication, which is essential for effective participation in the WNU-SI programme.

NUCLEAR ENERGY IN THE WORLD

At the beginning of this century, a renaissance of nuclear energy was envisaged after decades of project moratoriums.

However, the accident that occurred in the Fukushima power plant as a result of the *tsunami* that hit Japan and the economic and financial crisis that affected Europe and America lead to a new freeze of nuclear energy expansion plans.

From your broad perspective as director of World Nuclear Association:

What is your analysis of the current situation of the nuclear industry around the world and its future?

The global picture now is very promising. There are currently more than 60 reactors under construction and ten reactors started operating around the world last year. These are levels of new build activity not seen for the last 25 years.

It is true that market conditions, particularly in deregulated markets, are proving challenging for some reactor operators. In addition, some subsidies and government schemes aimed at promoting renewables are distorting markets. It is vital that these issues are addressed to ensure that energy markets and energy policies take into account the merits of all forms of generation to ensure long-term affordable and reliable supplies.

And more specifically in Europe?

Nuclear energy is one issue on which there is a wide variety of views within Europe. Unfortunately this means that at a European level nuclear energy is ignored, with the focus being on common targets for renewables and energy efficiency.

Europe was one of the pioneers of nuclear energy, and today nuclear is the single largest source of reliable low carbon electricity in the European generation mix. However, market conditions in many countries favour short-termism over sound long-term planning. This is slowing the pace of new nuclear build.

Unless ways are found to encourage new nuclear build in Europe the progressive retirement of existing plants coupled with political phase out policies, as seen in Germany, will result in a gradual decline to nuclear capacity in parts of Europe.

There are ways of achieving new nuclear build in Europe. The UK government has given clear indications it wants to see an expansion of nuclear generation as part of its energy policy. It now needs to deliver on that proposal and commit to the first wave of new nuclear build planned for deployment over the coming decade. Finland has developed its own approach to enabling new nuclear build, as well as making progress on implementation of its waste policy. These positive developments need to be learnt from and repeated across Europe to ensure it can transition to a low carbon energy mix.

REGARDING INVESTMENT IN NEW NUCLEAR PROJECTS

In what areas of the world is the investment in nuclear power plants growing?

China is setting the pace for investment in new nuclear power plants. Currently it has 34 reactors in operation and 20 reactors under construction. It aims to have just under 60 GWe of nuclear capacity in operation by around 2020, and to go on from there to overtake the US to have the largest nuclear capacity of any one country before 2030.

New build is also making good progress in Russia and India, with eight and six reactors under construction at present. Four reactors are under construction in the UAE, demonstrating that new build can be effective in new nuclear countries.



What is the profile of the new investors?

New investors in nuclear energy are found worldwide, in eastern and southern Europe, Africa, the Middle East and all parts of Asia.

Those countries with particularly advanced programs include the UAE (where four reactors are already under construction), Turkey, Vietnam, Belarus and Poland. Other countries with strong interests include Jordan, Bangladesh, Malaysia and Indonesia.

Many of these countries share common reasons for wanting to introduce nuclear generation capacity. They have growing economies, with an even faster-growing demand for clean and reliable electricity for their industry and their public. As the global population continues to rise over the coming decade this need for clean and reliable electricity will continue to grow.

How is the safety of the new facilities guaranteed in the very diverse countries that have ambitious plans to build nuclear power plants?

Firstly, it is important to have a competent national regulator in place with sufficient resources and expertise to be able to provide efficient safety oversight.

Another contributor to the safety of nuclear plants in new countries is the increasingly multinational nature of the nuclear industry. Early nuclear programmes in countries such as the United States, France, Russia, Canada and the United Kingdom were founded on national nuclear ener-

gy programmes. However, countries embarking on nuclear energy programmes today are more likely to start by using existing reactor technology supplied by the various multinational reactor vendors active in the market today. These vendors bring with them reactors designs developed with decades of experience. It is also in their interest to ensure that countries purchasing their reactors operate them responsibly. Many vendors offer training, with potential nuclear operators from newcomer countries gaining experience overseas.

What role can World Nuclear Association play in the monitoring of this new reality of nuclear energy in the international arena?

World Nuclear Association is very active in supporting emerging nuclear countries and helping promote dialogue between countries planning to build their first nuclear power plants and those countries with more established programmes.

We bring together the various companies involved in the nuclear industry together in our working groups and our conferences, to help share best practice.

We also, through the World Nuclear University, provide training to those in new nuclear countries. Our experts travel to these countries to run one-week courses that provide an overview of the nuclear industry and the issues surrounding it. We also, with



the assistance of the IAEA, welcome delegates from emerging nuclear countries to our World Nuclear University Summer Institute, where fellows receive lectures and training over six weeks that give an in-depth picture of the global nuclear industry.

WiN, NUCLEAR YOUTH AND THE FUTURE

You were a founder of Women in Nuclear and your career in this organization was recognized by WiN España in 2015 with the Special 20th Anniversary Prize.

At present and with a view to the new generations of professionals:

What role should an organization like WiN play? And Nuclear Youth?

WiN has a vital role in helping to support and encourage women working in nuclear industries throughout the world. The challenges faced by women may be different from country to country, but in all cases it is in the interests of companies and those supporting nuclear energy to draw on the talents of everyone. It is important to encourage women to enter professions within the nuclear science

WiN puts an emphasis on its role to inform and raise awareness of the benefits of nuclear energy and technologies, ensuring that it speaks to all society

and technology field as these fields are progressing and very interesting and rewarding to work within. In addition it is important with diversity at workplaces as this brings about development and adds value to their organisations.

WiN, which is open to membership from women and men alike, also puts an emphasis on its role to inform and raise awareness of the benefits of nuclear energy and technologies, ensuring that it speaks to all society.

Young Generation Networks play an important role in the nuclear industry of many countries around the

world. They provide support and networking opportunities to those in the early stages of their careers. The nuclear industry also benefits from the activities of these Young Generation Network groups, which bring a welcome dynamism and enthusiasm to their outreach.

Do you invite young people to consider nuclear energy as a professional option for the future?

I would strongly encourage young people to consider working in one of the many roles related to nuclear energy. Being able to rely on a constant and affordable supply of electricity is one of the fundamental requirements of a decent standard of living. Globally, there are still billions of people without reliable electricity supplies. And yet we know that, historically, the main sources of our electricity have been fossil fuels, which we now know are causing unprecedented damage to the environment. Working in nuclear energy means helping to provide reliable low-carbon electricity to all. It is an exciting industry, full of innovation and one vital to ensuring the well-being of people and planet.