

## **Key Note Speech**

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Ladies and Gentlemen,

On behalf of KernD and the German Nuclear Society I would also like to welcome you to our 50<sup>th</sup> Annual Meeting on Nuclear Technology in Berlin.

First and foremost, I would like to thank my predecessor and, at the same time, last president of our association under the founding name of the German Atomic Forum, Dr. Ralf Güldner, for his many years of dedication to our industry. In the last nine years, Dr. Güldner was president of the German Atomic Forum and during this time he first supported and then successfully shaped the discussion about a longer lifetime for the German nuclear power plants only to experience, like all of us a few months later, the Fukushima accident with all its political consequences in Germany. I would particularly like to thank him for his commitment during this period when he represented our industry with steady determination. In the years that followed, he actively participated in the many profound structural changes that took place in the field of nuclear energy: for example, the relaunch of the search for a final repository for highly active waste, the restructuring of all the institutions in the field of waste management and the reorganization of waste management financing.

Prior to this, Dr. Güldner was also the Chairman of the German Nuclear Society, the World Nuclear Association and President of the European nuclear industry association FORATOM. This experience, gained over many years of dedication to our industry, is extremely important and therefore I am particularly pleased that we will continue to have him as the deputy chairman of KernD.

Dr. Güldner, thank you very much indeed for your dedication, your commitment and, in advance, for your cooperation in the KernD association, a project that we have promoted together and guided to success.

### **Why the merger?**

Ladies and Gentlemen, Respected Colleagues,

At the 50<sup>th</sup> AMNT we are looking back together at the past, at what has been achieved in nuclear technology in Germany and at the history of our meeting and our associations, the German Atomic Forum (DAfF), the Trade Association for the Nuclear Fuel Cycle (WKK) and the German Nuclear Society (KTG). But even more importantly we are looking forward and preparing for the future.

This is the goal of the merger: to amalgamate both associations, the DAfF and the WKK, into the KernD Association. Following a long process with many discussions, initially between the two chairmen, then the managing boards and then the members of the associations, it was clear that the merger was the best solution to representing nuclear technology in Germany

powerfully, purposefully and efficiently. An association for the whole industry, a voice to the outside world and a constitution that also allows government bodies to cooperate, this was the goal and it was finally resolved yesterday at the two general meetings of DAtF and WKK.

### **What is the self-image of KernD, what are its tasks?**

KernD sees itself above all as a skills and expertise platform for public and regulatory dialogue as defined by our association's purpose: to preserve and promote the skills and expertise involved in the peaceful use of nuclear technology and in related disciplines. Under the heading, "For expertise and dialogue", our aim is to bring our expertise to bear in regulatory processes and legislative procedures on nuclear technology as well as in social dialogue.

We want to continue to attract and support schoolchildren, apprentices and students, who are the next generation that we urgently need, in addition to research and teaching. This is a task that we can fulfill more successfully if "a fascination for nuclear technology" is the approach as we are using it.

KernD's other content-related goals are to develop the expertise and economic contribution of nuclear technology in industry, research and in the area of experts and appraisers. In short, in the tangible sense, we are concerned with maintaining added value, and in the intangible sense with maintaining expertise, innovation and the ability of a modern industrial nation to participate, including in nuclear technology.

In a manner of speaking, our association and also its members live in two worlds: in the shrinking world of nuclear energy in Germany, where dismantling and disposal are the dominating topics. On the other hand, from a global point of view, we live in a world where nuclear energy continues to play an important role as a future option, where the construction of new plants, increased performance and the development of new concepts and technologies are relevant topics. One important task for the association is to support the constructive participation of Germany, i.e. of German nuclear industry sites, in global development in the future and to further strengthen the understanding for this among the population.

### **A word about Germany's role in nuclear energy and climate policy**

When we look at the world of power generation, we find that the renewable energies, wind power, photovoltaics, biomass, geothermal energy, tidal power and solar thermal energy only produce about 20 percent of the low-carbon electricity. 80 percent of the low-carbon electricity is obtained from hydropower and nuclear power, 31 percent from nuclear energy and almost half from hydropower.

In recent weeks, during discussions about phasing out coal for electricity generation, surveys have shown that the population is already aware or is now becoming increasingly aware that nuclear energy has a thoroughly positive role in preventing CO<sub>2</sub>. On this basis, we can expect that there will be long-term understanding for the fact that Germany is phasing out the use of nuclear power in its own country but that it can remain a supplier for those who want to continue to use nuclear power and it can also continue to develop the technology. This is also the position of the Federal Government in the coalition agreement.

Therefore, it can't be about completely phasing out nuclear energy as a whole, it can't be about closing the facilities in Gronau and Lingen and it can't be about refusing export credit guarantees for supplying German safety control technology to foreign nuclear power plants.

### **Innovation Made in Germany**

Nuclear technology in and from Germany is still at the forefront and is very powerful in research and development. Take the topic of accident tolerant fuel, for example. This is being developed worldwide and will offer greater reserves of robustness in the event of major accidents. Here, Germany is involved in the PROtect program which is the most advanced of all comparable programs. The irradiation tests with Swiss partners started in 2016; the first test assemblies were loaded into the Vogtle 2 nuclear power plant in the USA in April. This is also an example of the international collaboration within our industry.

In the USA, Urenco is preparing to enrich uranium to 19.75 percent for new applications. There, the Department of Energy itself is in charge of a pilot project aimed at new types of reactors. The Euratom Supply Agency is supporting a facility such as this for the EU with a view to the security of supply for research reactors. It is not even possible to discuss such a thing in Germany.

We also need extensive safety research in the future so that companies can continue to innovate and so that the State has access to the necessary skills and expertise for the safety assessment of nuclear installations and for the further development of safety standards. This research must include both new reactor concepts and innovative fuel assembly and fuel concepts. The companies of the nuclear industry are indispensable because, without practical application, it is impossible to maintain or further develop expertise. In view of the phase-out in Germany, the international market is vital if we are to apply our expertise in practice. Visible political support for our companies in international business would be highly desirable. This would help not only the German divisions of international nuclear technology companies but in particular the many medium-sized suppliers in German nuclear technology. Perhaps Mr. Bareiß, the Parliamentary State Secretary, will comment on this later.

### **Dismantling is well on the way**

Our companies dismantling the nuclear power plants are working through the program according to schedule and are making good progress. Applications have already been made for decommissioning and dismantling licenses for most of the plants still in operation. Our working relationship with the authorities is good and professional. It must also stay this way.

One topic that will occupy us for a long time to come is the acceptance of waste from nuclear power plants, which is subject to landfill regulations and has been released for disposal, at the responsible landfill sites. Support at federal state level is not always able to stop awkward situations from arising with landfill operators or local government. Continuous education is required to reassure them that these residual materials do not pose a radiological hazard, even if they come from the controlled area of nuclear power plants.

In spite of all the decommissioning and dismantling, we should not forget that there are still seven nuclear power plants producing electricity in Germany and their flexibility largely supports the stability of our electricity generation. With the 10,000 MW of currently installed nuclear power plant output, 76 billion kilowatt hours of electricity were produced in 2018, 11.8 percent of gross electricity generation. Reliable plant operation made Germany the second largest nuclear energy country in the EU in 2018 and resulted in the Isar 2 nuclear power plant taking second place in the generation rankings of all nuclear power plants worldwide.

The transition of operator responsibility at the site-based interim storage facilities for high active waste from the power plant operators to the BGZ [*Gesellschaft für Zwischenlagerung = Company for Interim Storage*] on January 1, 2019 went smoothly and inconspicuously. On January 1, 2020, the BGZ will also take over responsibility for site-based low and medium active waste storage facilities. This will conclude the new allocation of responsibilities for waste management. As is already the case with the central interim storage facilities, the government will take over a field that our industry has left in great shape.

### **What about the final repositories?**

Commissioning of the Konrad final repository remains a common concern of the power plant operators, the BGZ and all those with obligations to deliver, including the public sector and in the private sector. In the meantime, we have another completion date, though not until 2027, and with the ongoing review of state of the art compliance with the safety requirements, it appears that we will be worrying about the project over and over again.

When it comes to the site selection process for high active waste, all we can do is wait and see what happens. For the coming year, we are expecting the first report of the BGE [*Bundesgesellschaft für Endlagerung = Federal Company for Radioactive Waste Disposal*]

about subareas which are supposed to remain in the selection process. At present, for now we are discussing the publication of geological data in connection with the disclosure of the subareas. I am sure that Steffen Kanitz, CEO of the BGE, will bring us up to speed on this later.

### **Challenge Europe**

Despite all the enthusiasm for the opportunities in emerging countries such as China and India, we should not forget that the home markets in Europe and North America still play the key role for western nuclear companies. Europe is also the scene of the attempt to export the German nuclear power phase-out. This is a dangerous path which could bring new controversy into the European Union. It is with good reason that the decision regarding the energy mix is reserved for the Member States.

There is nothing wrong with constructively and competently bringing a German position, on safety issues for example, into the discussion. The key, however, is to convince others with objective arguments and, as mentioned before, for this we will need sound, practical expertise in nuclear technology in the future as well. In contrast, ritualized demands for the shutdown of installations close to the borders do not open doors but close them.

In the Commission's considerations regarding the reform of Euratom, it is also necessary to pay attention to the Doctrine of the Mean. Those who want to make the safety-focused Euratom Treaty into a phase-out treaty, as two opposition parties have been demanding for years now, will only drive a new wedge into the EU and generate strong opposition from those who want to continue using nuclear energy in the energy mix.

### **Is there a global upheaval in nuclear technology?**

Globally, it is possible to speak of an upheaval in nuclear technology. This is particularly evident in an increasingly dynamic landscape of innovation. The interest in SMRs is having a positive impact on the development of new reactor types. The financial risks are smaller than embarking directly on large-scale projects. And as a result, SMR projects are being driven forward in the United States, Canada, Russia, China, India, Argentina and the United Kingdom. Partly with proven light water reactor technology, partly with alternative designs such as molten salt or gas-cooled reactors, partly with new designs such as closed heat pipe microreactors or the uranium battery for remote areas or mobile use. The developments offer new opportunities for companies in the fuel cycle, including the North American subsidiaries of European companies.

The increasing social commitment to nuclear energy is somewhat new and unaccustomed for Germany. Discussions on climate policy and the possibilities for effectively reducing CO<sub>2</sub> emissions play the main role here. We should mention organizations such as Environmental

Progress, Energy for Humanity and the Bill and Melinda Gates Foundation which, along with many others and together with the nuclear societies, stand up for and promote nuclear energy.

We must adopt this optimism with our new KernD association. Above all, we must plant the idea into the minds of the younger generation that it is worth being involved in this technology, that it offers huge potential and a wide range of development opportunities. In Germany we still have the network, the expertise and the industrial as well as scientific substance to cooperate in development and to advance nuclear technology. In the challenging situation in Germany, we must work together as an industry and act in concert. Our joint association is an important step towards this goal and it deserves our full support.

Ladies and Gentlemen,

Your commitment is essential to our meeting, making it into the forum for sharing ideas and maintaining contacts that we both know and love. I would like to thank you very much for all your contributions to the program planning, for the preparation and acquisition of specialist lectures and for your lively participation in all the discussions.

I would also like to thank our many partners in the industry exhibition and all those who have contributed to our joint review of the past on the occasion of the 50th anniversary of our meeting. Of course, I am particularly pleased to welcome our British and Czech partners with their national pavilions and also our other international exhibitors.

The KernD reception, to which you are all cordially invited, will be held in the exhibition space immediately after the plenary session. Following this, we can look forward to the traditional social evening which our exhibitors and sponsors warmly invite you to attend.

I wish everybody a successful meeting, fruitful discussions and exceptional insights into our common passion, nuclear technology. Thank you.