
KNOWLEDGE MANAGEMENT AND ATTITUDE TOWARDS NUCLEAR ENERGY: THE RUSSIAN DIMENSION

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The paper presented by the author at the first IAEA Knowledge Management Conference (2004, Saclay, France) was dedicated to the main achievements of the Soviet Union and Russia in generation and systematization of nuclear knowledge and in providing human resources for their application.

Nevertheless, some well-known nuclear professionals consider the breach of the normal knowledge transfer process, which occurred when nuclear power plants have been transferred from the half-military nuclear complex with its high level of discipline to the civil “boiler power industry” (quite unprepared for that), as one of the relevant causes of the Chernobyl accident.

The crises of 1980-90ies (Chernobyl accident, changed political system, collapse of the USSR) have stopped the development of nuclear power industry and gave a severe blow to the nuclear knowledge management system.

In present conditions, which can be surely described in the terms of “nuclear renaissance”, it seems important to trace, how the preserved and developing knowledge management system is influenced by the attitude towards nuclear energy in the country and in its “components” (governmental authorities, energy community, public), as well as to follow up the role of nuclear professionals in forming the above attitude.

Governmental support of the nuclear education, which has begun from its establishment in the Soviet Union almost simultaneously with the start of the “Uranium Project”, was preserved, and continues at present. This Conference will undoubtedly analyze in detail the issue of nuclear education.

Less known, but vitally important, is the government’s “target” support of talented young scientists (and their tutors), who, in conditions of obvious destructive processes in the Russian science of the 90-ies, continued to support, and then to develop the potential of nuclear research and development. The government conducts and expands its support programs for young Russian scientists, leading scientific schools (President’s grants), and unique facilities of Russia, which attract young scientists by the possibility to work together with nuclear science leaders and on world-level facilities. The share of the “nuclear sector” in the total amount of support of technical sciences reaches 20%.

The list of measures of direct governmental support aimed at preserving knowledge (for example, financing of this activity-related technologies, scientific schools for young scientists, etc.) can certainly be continued, including, for instance, such a dramatic solution, as the postponement of military service (in conditions of the military duty law), granted to thousands of young nuclear specialists in the last years (however, this year is the last for this privilege).

However, political and moral support of nuclear energy on the governmental level is equally important. This support, especially in Russian conditions, has a strong influence on the social climate and, thus, on the inflow of specialists, which determines the very possibility of nuclear development. Statistical data shows that, after the President announced the development of nuclear energy to be one of the most important tasks of the country and the

program of major budgetary investments in this national economy sector was adopted, the share of positive nuclear-related publications in the central mass media increased more than thrice (from 20% to over 60).

Perception of their proper place in the **country's energy sector**, along with the development of corporate contacts with their colleagues, was a weak point of nuclear professionals for a comparatively long time. This is unacceptable in current conditions, when, besides synergetic projects (nuclear energy for production and transportation of fossil fuels, etc.), which virtual yet, there exists – and is already understood in the fossil energy sector (also not without using the authoritative resource) – the need and possibility for Russia to quit its “gas addiction” and to invest its export income in developing nuclear energy and saving fossil fuels, instead of burning them in power plants. Creation of a pro-nuclear climate in the traditional energy sector would directly promote the inflow of specialists, while also preserving and developing the nuclear specialty in the energy education system.

Preparation of documents for G8 Summit in St. Petersburg (2006) – where the nuclear professionals made a weighty contribution, especially as concerns the issues of long-term energy strategy – is a good example of the above.

The **public** attitude towards nuclear energy determines the status and perspectives of the critical nuclear development factor – that is, involvement and training of new specialists, which must have enough time for receiving the experience of the community of the “first nuclear era” specialists, which is rapidly thinning out.

It should be clearly understood that the initial nuclear energy image existing in the “public memory” for 60 years of existence does not allow this industry to become one of traditional and customary technologies of the energy mix, which the public would estimate on the basis of its objective parameters. The Russian dimension in the attitude towards nuclear energy is peculiar, because the majority of the country's population considers its social position as unsatisfactory – and this circumstance, as sociologists know well, enhances the external impact on the public opinion and leads to its radicalization and to mythologization of actual problems.

Today, in conditions of nuclear energy propaganda launched on the government level, nuclear professionals should shift the center of their attention from the already-proven “existence theorem” to calm and positive dialogue with the public on regional and local issues, which are regularly and professionally enough raised by environmentalists.

On the whole, nuclear professionals, anxious about inevitable and fast development of their sector and, in the first turn, about assuring personnel for it and transferring their knowledge to the new generation, should learn not only to solve their internal problems in an efficient way, but also to interact with the outside society. This need was already understood, and the IAEA played an important role in this connection (we know that there is no prophet in its own country).

Leaving aside the whole spectrum of activities of the Federal Atomic Energy Agency and the nuclear community in the field of nuclear knowledge management improvement (which makes the subject of other presentations), let us only note the critical importance of the current moment, when the reform of the nuclear industry complex and the establishment of a vertical holding company (a sort of nuclear Gazprom) enters its practical phase. The new law adopted with this view doesn't forget the nuclear education, too, so there are reasons for hope that this process would bring new prospects to knowledge management.

In these activities, nuclear professionals should not miss a single opportunity to send a “positive message” to the public. For example, such an informational occasion, as the 60th anniversary of the first Soviet (and the world’s oldest operating) reactor was successfully made a nationwide mass media event and a convincing demonstration of the Russian science and engineering potential.

The issue of knowledge management and specialists’ involvement and training is not a narrowly-corporate issue, and requires from nuclear professionals skillful interaction with the general public and separately taken social groups. Russia has an interesting experience in this field, and we are ready for efficient international cooperation.