



KOZLODUY NPP REVIEW

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Management of social consequences after decommissioning



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Pursuant to agreements of the Bulgarian government and the European Union, Kozloduy NPP will shut down Units 3&4 by the end of 2006. This forthcoming closure of units with a total capacity of 880 MW was the reason to change the previously existing Program for Management of Social Aspects after Decommissioning of Units 1&2. A new Program was announced at the beginning of October 2006. The updated document was prepared by the KNPP management and the trade unions.

The authors of the new Program took into consideration the measures envisaged in the Decommissioning Strategy for Units 1-4. The most significant difference between the older version of the Decommissioning Strategy and the new one is the principle of the so called "continuous dismantling" which does not allow for interruption in the decommissioning process as regards human

resources, technical equipment, finances, etc. This approach also guarantees personnel are retained and nuclear knowledge is preserved. A reduction of the staff is not planned until 2009. The

Program for Management of Social Consequences envisages optimization of the human resources in the process of decommissioning and re-qualification of personnel. In preparing the document, international trends were taken into consideration as well as experience in similar projects in Great Britain, France and other countries.

The Program for Management of Social Consequences after shut-down of Units 1-4 covers the whole period between 2006 and 2018. Its main purpose is to minimize the negative consequences rising up as a result of the decommissioning.

Three of the major directions considered in the Program are:

- ▶ Providing employment for qualified personnel at Units 1-4 till the end of the first decommissioning stage
- ▶ Providing social protection for personnel which are subject to layoffs resulting

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Management of social consequences after decommissioning

from decommissioning

- ▶ Ensuring alternative employment in the region in order to avoid secondary unemployment.

The measures envisaged in the Program will be financed with Kozloduy NPP's own funds.

The previous experience of Kozloduy NPP in human resources management was applied in the preparation of the Program as KNPP already shut down Units 1&2 in 2002. Analyses and forecasts were done for variations in the number of employees under the new conditions. Thus, possibilities are examined for redirection of staff from Units 1-4 to other departments.

Several factors were taken into consideration when planning the measures for reduction of negative social consequences of decommissioning.

First, several groups of personnel were differentiated which will be immediately impacted by the closure. They were categorized according to their functions and qualifications so as to find their best realization in the future. According to their qualification, several groups of specialists were determined: qualified operational personnel and engineering support experts, non-operational maintenance personnel, specialists from departments other than Units 1-4, and administrative personnel.

Second, the requirements of the Bulgarian nuclear legislation are taken into account. According to the updated Decommissioning Strategy for Units 1-4, the

spent fuel will stay in special ponds by the reactors till 2010-2012. Until then, the 440-megawatt Units will have a license by the Nuclear Regulatory Agency (NRA) for operation in condition "E" (at zero power while spent fuel is preserved in ponds). This condition requires abiding by legal regulations in a way similar to that of operational units. Therefore, the existing pay-roll structure and number of staff will be preserved with minor reductions until permission for decommissioning is received by the NRA. Permission is expected in 2010 for Units 1&2, and in 2012 for Units 3&4.

Third, the volume of various activities was analyzed. According to preliminary estimations, the volume of work in technical control and metrology control will be reduced. These activities are managed by the Diagnostics and Control Department and Metrology Assurance Department. On the other hand, the volume of work is expected to increase in other departments related to training, dosimetric control, and spent fuel management.

In this Program are also envisaged specific measures for managing social consequences.

Employment

Providing employment for personnel at the 440-megawatt Units will be achieved through re-qualification and directing people to vacancies elsewhere within the company. The specialists will be trained in spe-

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cial programs which will guarantee they would be prepared for new positions in the decommissioning process. At first, upon closure of Units 3&4 and before decommissioning permit is issued, staff will be needed for various activities:

- ▶ Operation of Units in line with licenses for operation in condition "E";
- ▶ Dismantling of equipment of 3rd category (not related to nuclear safety);
- ▶ Preparation of documents prior to issuing decommissioning permit;
- ▶ Implementation and operation of equipment needed for decommissioning;

Qualified operational personnel could be involved additionally in re-qualification courses for working at Units 5&6 as well as Safety Department, Engineering Support, etc. where a previous operational experience is mandatory.

A real alternative for maintenance personnel will be acquiring a welding qualification or other professional qualifications which are sought at the labor market. Therefore, the Training Center at Kozloduy NPP will create a special welding workshop.

After 2010-2012, it will be necessary to redirect personnel as spent fuel will be taken out of the ponds. Various work activities will be specified in accordance with the approved Decommissioning Plan.

Although a necessity of redirecting staff will occur relatively late, the Program for Management of Social Consequences now enforces a series of measures aimed at adaptation of personnel to coming changes. Data should be gathered about everybody's preferences regarding future professional career. Specialists from the Human

Resources Department are ready to consult Kozloduy NPP's employees who will be impacted by the changes. It is envisaged that consulting will end by the end of 2007. In order to help people in getting jobs outside Kozloduy NPP, the company Intranet will provide an adequate and up-to-date database of vacancies in the energy sector. Kozloduy NPP will provide help to everyone who seeks employment in Bulgaria and abroad. Potential employers will have access to this database.

Social protection

The Program envisages social protection for personnel directly impacted by the closure of Units 1-4. This will be done by financial compensation in case people opt for the so called "early retirement". Also, qualified personnel will be retained at Kozloduy NPP through a set of benefits.

The Bulgarian legislation envisages options for early retirement of people who worked in first and second labor category. The Kozloduy NPP's Collective Labor Agreement envisages financial bonuses for early retirement so as to make this option preferable. The company management and the trade unions share the opinion that this bonuses should be kept in the next Collective Labor Agreement.

Highly qualified personnel who will be dismissed upon decommissioning will be offered individual agreements with Kozloduy NPP. Pursuant to these agreements, employees will keep their positions until a decommissioning permit is issued; after that they will be financially compensated.

Partnership

Alternative employment

Kozloduy NPP encourages in every possible way the economic development in the region as well as alternative employment. KNPP's goal is to help overcome negative effects of decommissioning. This will be achieved through cooperation with NGOs such as the Kozloduy Regional Economic Development Initiative and the Kozloduy Business Center.

The major goal of Kozloduy NPP in this partnership is to preserve the social status and living standard of the plant employees. In order to provide an efficient organization, Kozloduy NPP will start collecting data about employees and their family members. At the end of 2006, a database will be open for employees who wish to enter information about their families.

The company will provide opportunities for unemployed citizens under the Employment Promotion Act. Special vocational courses will be organized through the Kozloduy Regional Economic Development Initiative.

To increase competitiveness on the labor market, the Kozloduy Business Center will provide motivational courses for Kozloduy NPP's personnel and their families. The Center will help those who choose to start their own business through financial assistance. A special

webpage will be developed in the company Intranet to provide relevant information about business opportunities in the region.

Facts & Figures

4,847 people work at Kozloduy NPP as of November 1, 2006. Out of this figure, 1,360 are employed at Units 1-4. Estimations show that 298 employees will reach retirement age by the end of 2009. According to human resources specialists, in the first ten years following the shutdown of Units 3&4, about 900 people will be needed for various activities at the 440-megawatt Units.

Kozloduy NPP interns present projects

Experts praise their efforts

On September 21, 2006 the participants in the summer internships presented the projects they prepared during the stay at Kozloduy NPP.

The event took place in the KNPP's office in Sofia in the presence of specialists and managers. The KNPP specialists said the interns worked carefully on the chosen topics and came to interesting solutions. The projects will be of certain benefit to Kozloduy NPP, the experts said.

In the summer of 2006, 22 students had their internships at Kozloduy NPP.

GRS seminar

Kozloduy NPP hosted an international seminar organized by Gesellschaft fuer Anlagen und Reactorsicherheit (GRS), Germany. The event was organized jointly with the Bulgarian Nuclear Regulatory Agency. The theme of the seminar was "Licensing and control in preparation and decommissioning of nuclear facilities." This was in fact a follow-up of a similar seminar hosted in the town of Slavutich, Ukraine, in July 2005.

The seminar took place at the KNPP's Recreational Complex at Ledenika from September 25 to 29. The meeting was attended by representatives of the nuclear regulators in Bulgaria, Germany, Russia, Kazakhstan, Latvia, Lithuania, Uzbekistan, Georgia, Armenia, Kyrgyzstan, and Slovakia. Among the participants were Valery Kolchenko, Chairman of the Environmental Committee at the Ukrainian Parliament, and Olga Makarovskaya, Vice-president of the State Nuclear Regulatory Committee in Ukraine.

Four specialists took part on behalf of Kozloduy NPP. Valentin Ribarski, Head of the Decommissioning Department, presented his paper "Decommissioning Strategy at Kozloduy NPP." In this document he described the stages and the activities related to decommissioning as well as licensing issues. The presentation evoked serious interest among the experts as it was the first time to present the strategy for "continuous dismantling." It starts when units are in condition "E", i.e. at zero power and fuel rods in the water ponds by the reactors.

All the participants had the chance to

visit Kozloduy NPP's site. Mitko Yankov, Safety and Quality Director, welcomed the guests at the Information Center. During the meeting, he made a presentation to familiarize the visitors with the current developments at the plant, and talked on safety, human resources and social policy.

German industry representatives visit Kozloduy NPP

His Excellency Michael Geier, Ambassador of Germany to Bulgaria, visited Kozloduy NPP on October 16, 2006, together with managers from various companies. The visit was initiated by the German-Bulgarian Industrial and Trade Chamber. The delegation was led by Wilhelm Kraus, Chamber President, and by Dr. Mitko Vassilev, Chief Chamber Manager. More than 30 representatives from German and Bulgarian companies were included in the delegation.

In the Information Center of Kozloduy NPP the guests had the opportunity to meet the nuclear plant managers. Ivan Genov, Executive Director, made a presentation to familiarize the visitors with the company and the major modernizations that were implemented here. He pointed out the importance of the plant as a reliable key electricity supplier in Bulgaria and in the whole region. Mr Genov also emphasized the participation of Kozloduy NPP on the deregulated energy market in Bulgaria. The director said that Kozloduy NPP had a long history of successful cooperation with German companies especially in the Modernization Program for Units 5 and 6.

International cooperation

Kozloduy NPP expert heads WANO mission



Vladimir Uruchev (in the middle) talks at the final meeting

Vladimir Uruchev, chief engineer of Units 1-4, headed the international WANO peer review at the Kola NPP, Russia. The peer review was held from October 8 to 20.

Fifteen specialists from several countries took part in it: Russia, Ukraine, Pakistan, Lithuania, Armenia, USA, France and Hungary. Stoyan Genov, head of General Technology Sector, was the other KNPP specialist to take part in the mission. In the course of two weeks the experts examined various aspects of the plant operation – management, safety and reliability, maintenance, engineering support and radiation protection.

The Kola NPP managers thanked the experts for their work and exchange of experience. They said the review was a success as it proved the safe operation of the plant.

Delegation from the Romanian nuclear regulator

A delegation from the Romanian National Commission for Nuclear Activities Control visited Kozloduy NPP on October 23, 2006. The group was led by Vilmos Zsombori, President of the commission. The guests were accompanied by Sergey Tsochev, Chairman of the Bulgarian Nuclear Regulatory Commission (NRC), and Alexander Rogatchev, Director for International Cooperation and European Integration at the NRC.

The group was welcomed by Kiril Nikolov, Production Director of KNPP, and by Mitko Yankov, Safety and Quality Director. Mr Yankov made a presentation about the nuclear reactors on the site, and pointed out the large-scale modernization program implemented by the plant. He stat-

ed the goals of the modernization program:

- ▶ to enhance safety and reliability
- ▶ to sustain preventive maintenance
- ▶ to improve Units' operation
- ▶ to extend Units' design lifetime with

15-20 years.

Kozloduy NPP is the most frequently inspected nuclear plant in South-Eastern Europe, Mr Yankov said. He added that all the international missions at Kozloduy NPP proved that reactors were safe.

Following the meeting with Kozloduy NPP managers, the guests visited the control rooms of Units 2, 3 and 5. They had the chance to get familiar with the VVER technology for both 440-megawatt and 1000-megawatt Units.

Kozloduy NPP receives license for staff training



On October 5, 2006 Kozloduy NPP received a license for specialized training of staff for activities at nuclear installations, and for operations with sources of ionizing radiation. This training is organized at the Kozloduy NPP's Training Center. Sergey Tsochev, Chairman of the Nuclear Regulatory Agency, handed the document to the Executive Director Ivan Genov. The license was issued pursuant to the Safe Use of Nuclear Energy Act as well as the Regulation for Specialized Training for Operation at Nuclear Installations and Operation with Sources of Ionizing Radiation. This is the first license of its kind in Bulgaria.

The license is required under the changes in the nuclear legislation enforced in 2004. These changes addressed the way of obtaining professional qualification by enforcing licenses for educators of nuclear facilities' personnel. Thus, Kozloduy NPP as a legal entity had to obtain a license for its Training Center.

Various analyses were made so as to meet the criteria underlined in the

Regulation. The deadline for meeting the legal requirements was two years following the Regulation enforcement. This deadline was met. By acquiring a license, Kozloduy NPP guarantees conformity with the legal basis as regards preparation of personnel.

According to Liubomir Pironkov, head of Personnel and Training Center, the license paves the way for a completely new approach as it introduces a procedure for preparation of specialists who need to undergo licensed training. This is required for about 90 positions at Kozloduy NPP. Under the new requirement, the number of training hours is increased and so is the volume of knowledge to be covered. Until now, the necessary knowledge and skills

Ivan Genov:

The license comes as a result of a job well done on part of the team that prepared the project.



were defined based on job descriptions. In the future, this analysis will be done according to the specific needs of each professional. A special training program will be prepared for each employee based on his operational experience as well as his score at previous tests. Upon completion of training, everyone will have to pass an exam before a commission.

The license mainly covers Kozloduy NPP's own activities but it also allows for training of external clients. This is the case with training specialists who work with sources of ionizing radiation where the holder of the license issues certificates.

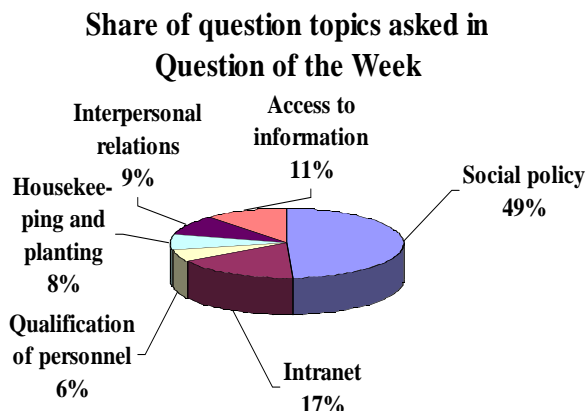
The new organization of training calls for significant human and financial resources. According to specialists, this is a serious challenge. Mr Pironkov said Kozloduy NPP demonstrated understanding about the coordinated efforts between various company structures.

Question of the Week turns one year

The advantages of the company Intranet

By the end of August 2006 we marked one year since the company website (Intranet) first broadcast a weekly poll which was called "Question of the Week." This poll is open to everyone who enters the Intranet. The summarized results are only valid for the respondents who participated.

The attitude of personnel at Kozloduy NPP toward internal communication is illustrated by the chart:



This comes to illustrate clearly the topics which have highest priority for Kozloduy NPP management. Namely, these are topics related to Kozloduy NPP's social policy, Intranet, and awareness of personnel regarding current and topical issues.

The major benefit of the weekly poll "Question of the Week" is that it became an effective means of communication through which employees get the chance to voice their opinion on sug-

gested topics. On the other hand, the results of these polls help various departments to optimize their work organization. Staff input on respective topics is also important for top management with respect to decision-making.

The "Question of the Week" definitely pinned people's attention. We asked 53 questions in the one-year period and received 26,374 answers, or each question received 497 answers on average.

The poll "Question of the Week" serves as a source for topics in the commentary section of Kozloduy NPP daily radio broadcasts. In these broadcasts managers and specialists offer detailed information on issues related to the online poll. It is worth mentioning that Kozloduy NPP is among the few companies in the nation with its own cable radio network.

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KOZLODUY NPP REVIEW

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