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# STATUS OF THE ROMANIAN NUCLEAR POWER PROGRAM AND THE STRATEGY RELATED TO THE PUBLIC INFORMATION -

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## 1. Introduction

The year 1997 represented for the Romanian nuclear power sector the year of the performances and capabilities proved Cernavoda NPP' s unit 1 operation, after one year of successful operation. Good performances of this unit could represent a positive impact on further development of nuclear power in Romania, considering first the completion of Unit #2 and for National Heavy Water Reactor Program.

On the other hand, "The years of 1997 and 1998 marked for the Romanian Electricity Authority a new and completely different perception of the Romanian power sector".

Recently, the first step of the restructuring of power sector has been accomplished. The Romanian Government approved the creation of **the National Power Grid Company** and the moving-out of the nuclear activities.

The present Nuclear Power Group from RENEL was transformed in a separate entity, the **National "Nuclear Electrica" Company**, including three subsidiaries, no legal persons, one for nuclear power production **CNE-PROD** (Cernavoda Unit 1), one for nuclear power development **CNE-INVEST** (Cernavoda Unit 2 to 5) and one for nuclear fuel fabrication **FCN** (Pitesti Nuclear Fuel Plant).

The other Units from Nuclear Power Group, such as the Heavy Water Plant - **ROMAG**, Center of Technology and Engineering for Nuclear Projects - **CITON** and the Institute for Nuclear Research-Pitesti - **ICN** have been transformed in a state owned company - regie autonome type - for nuclear activities.

To better understand the aspects related to the nuclear power in Romania and the necessity of the continuation and development of a public information strategy based on the new look of the nuclear power sector, please, allow me to present you a few things with regard the Romanian nuclear program.

## 2. Cernavoda Nuclear Power Plant

The Romanian nuclear power production is located on **Cernavoda Site**, in Dobrogea region on the right side of the Danube River, about 180 km East of Bucharest. The site consists of five units, of 700 MWe each, one in operation, one in construction and three preserved in different stages of construction.

**Unit #1** was completed under the Project Management Contract (PMC) concluded between RENEL and AECL-ANSALDO Consortium (AAC). This contract was the first significant co-operation action of western organizations and a utility of Central and Eastern Europe for the completion of a Nuclear Project. Cernavoda NPP is the sole nuclear facility in Eastern Europe effectively relying on Western technology and on internationally recognized safety criteria.

The Cernavoda Unit 1 reactor started the commercial operation from December 2, 1996 and the total generated power produced during its lifetime, to October 1998, represents 11,095,358 MWh with a gross capacity factor since in service of 86.19%. During 1997 the gross generated power represents 5,400,855 MWh and the net power delivered to the grid represents 4,966,250 MWh, about 10% of the overall power production of the country, saving 1,35 million tones of imported oil, equivalent of about US\$ 110 millions. The gross capacity factor achieved during 1997 is 87,27% and for the first ten months of 1998 is 83.59%. The forecast for 1998 represents 5,000,000 MWh delivered to the grid

Since June 30, 1997 the entire responsibility of Unit 1 operation was transferred from AAC to Romanian operation team and starting with August 1, 1997 the Probationary Operation Licence was issued by the Romanian Regulatory Body CNCAN. A small team of Canadian and Italian consultants are providing advisory services to the Romanian operators, starting with July 1, 1997.

At the end of 1997, 75% of the nuclear fuel in the Cernavoda reactor core, irrespectively, about 3500 nuclear fuel bundles, was fabricated by the Romanian Nuclear Fuel Plant-Pitesti.

Today, all Unit 1 reactor core contains nuclear fuel produced in Romania.

The heavy water for the Unit ' 1 initial loading and maintenance was supplied by the Romanian heavy water plant - ROMAG.

Now ROMAG is producing heavy water for Unit #2 from Cernavoda.

The "soft" support for the Romanian Nuclear Program is provided by the **Nuclear Research Institute** - ICN for specific Research and Development (R&D) activities and by **Center for Nuclear Projects Engineering and Technologies** - CITON for design and engineering activities.

As far as **Unit 2** is concerned, the work schedule for its completion and commissioning by the year 2002 represents an integrate part of the Romanian Government developing strategy for the power industry. A Governmental decree has declared the Unit 2 a national priority for the next five years. To this effect through Prime-Minister's decision, an Interdepartmental Committee has been established to follow-up the negotiations and completion of the contracts for the Cernavoda Unit 2.

The preliminary analysis assessed the total construction progress of Unit 2 at about 25% and the components already procured at about 70% of the whole procurement. The capital cost assessed for Unit 2 completion is 750 MUS\$ (January 1995 values).

As it concerns the others Units of Cernavoda NPP, **Unit 3** is foreseen to be commissioned after 2005 and **Units 4 and 5** are scheduled to be completed after 2010.

### **3. Public Information Program Strategy.**

The main targets considered when assessing the strategy related to the public information were:

- education and built-up of a credibility on the construction of a nuclear power plant in general, and of the Cernavoda NPP, in particular;

- once such a credibility has been gained, there should be some guiding of the policy to maintain and amplify this trust and, at the same time, to prevent and monitor the situations of crisis.

Starting from these considerations a Public Information Program has been initiated some years ago, a program whose main target has been and still is the education and information of the people.

When developing the Program, three parameters were considered:

1. the audience should be the focus on;
2. items of interest;
3. the most adequate educational, information and communication methods.

### The audience

To whom an information program should be addressed at first?

This is a question which can get a very simple reply: to everybody: To all those that the complete success of an action depends on.

### Methods

- Elaboration of written documentation
- Educational programs for the young generation
- Advertising materials
- Visits on the nuclear objectives' sites
- A permanent connection with mass media
- Relationship with Local Communities

### Suggestions for the Future

- Caring out educational programmes for young people
- Arranging at Cernavoda NPP some points for checking the radiation level and for studying the influence of radioactivity on the living beings
- Caring out computer assisted education programmes
- Establishing a new relationship with mass-media
- Accomplishing an adequate information
- Advertising actions
- Establishing new relationship with non-governmental organisations and local communities

## 4. Conclusions

These are only some aspects related to the nuclear power in Romania and in the Public Information strategy.

The conclusion is that for Romania nuclear power based on PHWR technology is a valid, safe, economical and ethical option and the one year and half commercial operation of Unit #1 from Cernavoda NPP fully demonstrated it. The restructuring of the nuclear sector has to rely on clever decisions, to maintain a "unity in diversity" of this industrial and scientific sector of the country.

On the other hand, it is our every day and future target to make clear most aspects on the nuclear energy, in general, and on nuclear power plant - the Cernavoda NPP, in particular, and to bring at everybody's hand as much as fresh and accurate and correct information on the nuclear issues of interest.