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NUCLEAR POWER - PRESENT AND FUTURE OPTION FOR ROMANIA

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Abstract

Romanian option for nuclear power expressed in '80 was based on evaluation of electricity demand and supply, and domestically primary energy resources assurance.

To assure energy independence and cover electricity demand a nuclear power program was developed based on CANDU-PHW reactors.

Independence of foreign suppliers, the need of diversifying the energy resources and modernisation of national industry have been the major factors in introduction of CANDU-PHW reactors.

The objectives of Nuclear Power Program refer mainly to the completion of Cernavoda NPP and to the development of nuclear fuel cycle activities and horizontal industry Cernavoda NPP, with a final profile of 5x700 Mwe, is the first objective of nuclear power program.

Unit 1 of Cernavoda NPP was commissioned in April 1996, and will be in commercial operation until the end of this year.

Romanian Nuclear Power Program envisages a large national participation in all stages of NPP design, construction, commissioning, operation, maintenance as well as nuclear fuel, heavy water, equipment and materials supply.

A great support is also assured for engineering, research and development activities.

The decision to continue the nuclear power program has an important support in successful commissioning of Cernavoda NPP Unit 1.

Nuclear power is the future option of Romania. At present nuclear power represents 8% in electricity production and the completion of Cernavoda NPP will represent over 30% in electricity production.

The estimated nuclear electricity is at the same level with conventional energy costs, taking into account the environmental conditions.

Lessons learned until present will lead Romanian Authorities to improve future development of nuclear power program.