

# 60 years of nuclear program in Romania

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## The beginning – VVR research reactor

First research nuclear reactor outside the USSR started operation in October 1957 at Magurele. This reactor is under decommissioning now.

Later on it was followed by a Triga research reactor operating in Mioveni.



# The nuclear program – based on natural Uranium fuel reactor type - CANDU

First contact with US and Canada for CANDU technology following the decision to start a nuclear program. 2 x 300 MW units. Construction delayed and restarted with 4 x 600 MW



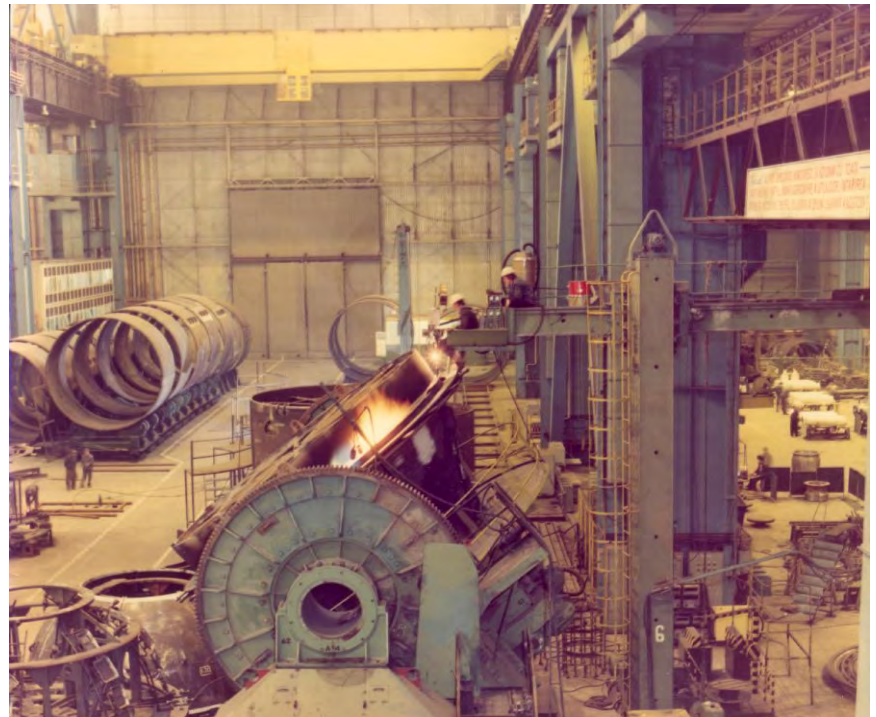
## Prepare the personnel for the nuclear program

The faculty of Energetics started the Nuclear Engineering section and later the faculty of Physics the Engineers-Physicists section



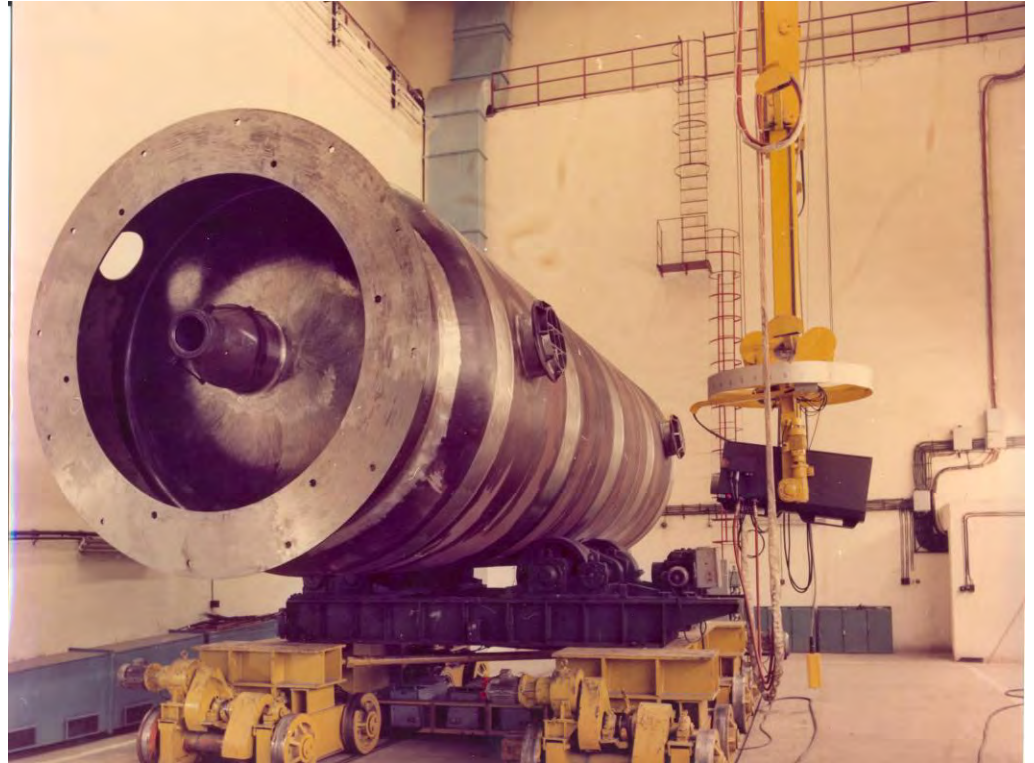
Prepare the industry – manufacturing capabilities for nuclear power plant equipment

Advanced manufacturing capabilities were put in place for the manufacturing of both CANDU and Heavy Water plant equipment under CSA Z-299 QA standards



## Manufacturing VVER 440 equipment within COMECON agreements

Romania has  
manufactured  
Emergency Core  
Cooling Vessels for  
the NPPs of  
Mohovce and  
Dukovani in  
former  
Czechoslovakia





## Cernavoda NPP construction and operation at high load factors



A fully fledged nuclear program that manufactured the fuel for CANDU, as well as the Heavy Water, and operated two NPPs having other two under construction. The Romanian nuclear program is one of the few that never stopped.

## The future of the nuclear program

Within the framework of the EU energy and climate change strategy nuclear acquires new importance with its emission reduction capability.

The new Small Modular Reactor technologies and the advanced designs such as ALFRED can add value to the power system of the future.

New training capabilities are developed based on e-learning, as well as new financing schemes for new power plants.

Fast breeders and Thorium technologies are starting to penetrate.



Thank you !

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