

## Mochovce 3+4

# The Ghost of Soviet Nuclear



22 years after the devastating Chernobyl catastrophe we are awaiting the opinion of the European Commission concerning a project that started in former Czechoslovakia before this accident happened in 1986. Not surprisingly the planned completion of the nuclear reactors Mochovce 3 and 4 in today's Slovakia by the Italian-Slovak energy utility ENEL/SE raises numerous problems and questions.

### The Mochovce project - a history with many obstacles

The construction of the four reactors (VVER 440/213) was planned during the 1980s in former Czechoslovakia. In 1982 the construction of the first two reactors began. However, after repeated delays these reactors started operation only at the end of the 1990s. According to the World Nuclear Association, construction of units 3 and 4 started as early as 1<sup>st</sup> of January 1985. However, the project was formally approved only after the Chernobyl catastrophe in 1986. But construction work was stopped in 1992 due to lack of funding.

Now ENEL/SE want to resume construction, 20 years after the original building permit was granted and 15 years after building activities were interrupted.



## Project planning is based on outdated Soviet technology

The VVER 440/213 is a Soviet Generation II reactor type, designed in the 1970s. Design and construction standards fall far short of current international standards. Furthermore, the extent to which structural improvements can be incorporated during the completion of Mochovce 3+4 is limited as 70% of the civil buildings are already completed and 30% of the technical equipment installed. It will therefore be impossible to adjust to current standards of reactors designs. Crucial safety features are missing. For example the reactors will be built without modern containment. Today's reactor designs use a double containment structure - a barrier against leakage of radioactivity in case of an accident and a protection against external events such as terror attack or plane crash.

Even the Slovak nuclear authorities and the project leaders admit that they will not be able to meet current technology standard for nuclear reactors.

The completion of this project would mean that nuclear reactors could start operating in the European Union in the 21st century, that are based on Soviet technologies of the 1970s.

#### More than questionable legal conditions

The completion of the two reactors are planned to be carried out on the basis of the building licence granted over 20 years ago. This means that the building is planned on assumptions that do not respect current legislation.

The project has, for example, never been subject to an environmental impact assessment (EIA) according to today's Slovak legislation and EU guidelines. Also the licensing procedure has been done without proper consultation of the public and neighbouring countries.

The project was approved when the nuclear authorities were not independent from the nuclear industry. The regulator was responsible for implementing the Czechoslovakian nuclear programme and was subordinate to the Vice-PrimeMinister, who was responsible for investment development.

The Slovak regulator stated that the elaboration of new documentation would be necessary, following current rules, to allow for the authorization of the plant.

Greenpeace issued a legal complaint against the Slovak government in February for their failure to carry out the necessary environmental impact assessment. Greenpeace states that this constitutes a `non-fulfilment of responsibilities by a state office'. The complainants in this case, point out that construction documentation has seen considerable changes, which means the Office for Nuclear Supervision of Slovakia would have to re-assess the authorisation granted.



#### Insufficient financing: the consumer will pay

Finishing the two reactors is officially estimated to cost between 1.6 and 1.9 billion Euros. During the 1990s several studies on the economical feasibility of the project were carried out, including by the European Bank for Reconstruction and Development. They all came to the conclusion that the project would not be profitable. In additional the Slovakian energy programme from 2000 states that even under the most optimistic assumptions, the project would be economically too risky.

In 2005 ENEL stated that completing this project would lead to financial losses. Only after the successful privatisation discussions between the Slovak government and ENEL, the company declared that this project would be promising.

The Slovak government took several measures designed at improving the financial basis for the Mochovce 3+4 completion and to make the project more attractive for ENEL. For example: The Communication from the Commission on Decommissioning funds stated that the fund for decommissioning in Slovakia has only accrued less than one tenth of what is required ( $\in$ 324 million when  $\in$ 3 600 million is needed) and official calculations had illustrated that it would be necessary to increase annual payments by the nuclear operator into the decommissioning fund in order to cover future liabilities. Despite this, the Slovakian Government has committed both in law and in its privatisation agreement with ENEL, to reduce the financial contribution from the nuclear generator.

In addition to the artificial trimming of liabilities, the so called "historical deficit" that occurred due to bad decommissioning fund management in the past is now to be compensated by payments imposed on all Slovak energy consumers.

Due to the questionable nature of this project and the public criticism several banks of a consortium that provide a loan over 800 million Euros to Slovenske Electrane have already earmarked their money to non-nuclear projects in order not to be associated with the Mochovce 3+4 project.

*Link to the movie "The ghosts of soviet nuclear: The case of Mochovce":* http://www.greens-efa-service.org/medialib/fe/pub/en/dct/126



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