

The use of decommissioning fund arrangements in Slovakia as financial advantage for the Mochovce 3 and 4 project

Jan Beránek, Jan Haverkamp
Greenpeace

April 2008

Summary and conclusions

Before, during and after the partial privatisation of the Slovak utility Slovenské elektrárne (SE) to the Italian utility ENEL, the Slovak government took several measures within the decommissioning arrangements for Slovakia's nuclear fleet that appear to be strongly motivated by attempts to improve the financial basis for the construction of the Mochovce 3 and 4 nuclear power plants and appease ENEL's initial reluctance towards the project. We highlight two in this paper:

- Official policy calculations indicated a need for increase of payments for the decommissioning and waste fund in order to be able to cover future liabilities and remove the already existing deficit. Instead, the annual sum to be paid into the decommissioning fund was lowered and capped, both by law and in the privatisation contract with ENEL, preparing an increased deficit in the fund that will have to be covered in the future;
- The future expected liabilities for the new capacity of Mochovce 3 and 4 (as well as for the other operating SE/ENEL nuclear reactors in Slovakia) was artificially lowered by a massive increase in the estimation of the so called "historical deficit" that is to be covered by all electricity consumers in Slovakia – also those that do not receive their electricity from SE/ENEL, and thereby lowering the part to be covered by SE/ENEL customers.

As a result, ENEL will be able to operate Mochovce 3 and 4 at artificially lowered costs, and the decommissioning funds in Slovakia will not be sufficient to fully cover the future decommissioning and waste disposal costs.

Whatever the preliminary arrangements Slovakia and ENEL included in the privatisation contract concerning coverage of the shortages that are bound to incur, these will have to be covered by future generations and not the present generation that possibly is to benefit from the electricity production by Mochovce 3 and 4. On top of that, the shift of part of Mochovce 3 and 4's liabilities to the "historical deficits" results in a burden shift at the benefit of ENEL/SE.

Greenpeace concludes that this constitutes illegal state aid by means of the mentioned burden shift and consciously created future deficits.

This analysis is based only on the basis of the official documentation available to the public and official Slovak data and estimates. There is a recent independent calculation that suggests that real final deficits will be even higher. This report is also attached [Ref. 6]. Due to newly available information, this report is to be updated later this year.

The use of decommissioning fund arrangements in Slovakia as financial advantage for the Mochovce 3 and 4 project

Slovakia has mismanaged issues related to nuclear reactor decommissioning and waste management in the past. Until 1994, there was no obligation for nuclear operators to contribute to funds for future costs related to those liabilities. From 1994 to 2006, the legislation introduced obligatory annual payments, but both their definition and fund management had numerous loopholes. As a result much less finances were accumulated than was expected and needed over these years.

This generated a large financial gap, referred to as the “historical deficit”.

The situation was further complicated due to the privatisation of a part of the Slovak nuclear energy sector, resulting in a situation where old reactors (the heavily damaged “A1” reactor and two VVER-440/230 reactors currently being phased out at Jaslovské Bohunice “V1”) remain in the ownership of the state, while newer blocks (two VVER 440/213 reactors of Jaslovské Bohunice “V2” and two at Mochovce “EMO1/2”) remain as assets of Slovenské elektrárne (SE). The Italian utility ENEL owns 66 % of the shares of SE, the other 34% are owned by the Slovak state. The burden of existing liabilities, including the corresponding part of the “historical deficit” obviously should be fairly shared by the state and Slovenské elektrárne/ENEL.

The issues of the “historical deficit” and the new ownership structure were both recognized as a serious problem and led to a process of legislation novelization that started in 2004. It resulted in a new law No. 238/2006 on nuclear decommissioning, which defines the currently valid practice with comparatively clearer definitions and rules than in the previous legislation. This clarity, however, exposed several outstanding and serious problems:

1. Despite acknowledged need, the payments were lowered

The historical deficit in the decommissioning fund was growing even after 1994 when the first Slovak legislation was adopted to address the issue. Therefore on 23 June 2004, the Slovak Minister of Economy proposed and the government approved a “Restructuring of the State Fund for Nuclear Power Plants’ Decommissioning and Spent Fuel and Radioactive Waste Management” [Ref. 1].

This document explicitly states that this is the first of fundamental problems:

*“SE [Slovenské elektrárne] is contributing to the existing fund by payments based on the volume of generated electricity. There are concerns that current payments are insufficient and that they will further decrease while older reactors are phased-out. **Unless payments are increased, there will not be sufficient funding to cover decommissioning costs.**” [emphasis added, Ref. 1, page 1, highlighted]*

Similarly, and as a logical conclusion, the document on its page 4 lists the key principles that need to be incorporated in the new decommissioning legislation:

“The obligatory payments must be defined at a level that will be sufficient to secure the necessary amount of finance in the fund” [Ref. 1, page 4, highlighted]

On the page 7 this document says that:

“Currently, SE contributes 2.6 billion SKK annually. Shall this situation continue (i.e. payments based on the installed capacity and generated electricity), the fund would accumulate a final deficit of approximately 78 billion SKK by the year 2100.” [Ref. 1, page 7, highlighted]

To summarize: the document says that the existing level of payments is not high enough, would built up a massive deficit in the future, and calls for an increase of the payments to a sufficient level.

The annual payments, defined at that time by the law No. 254/1994, were based on this model: 350 000 SKK per installed MW plus **6.8 %** of the selling cost of generated electricity [Ref. 2, page 5, highlighted].

However, the newly adopted and currently valid law No. 238/2006 changed the scheme to 350 000 SKK per installed MW plus **5.95 %** of the selling cost of generated electricity ¹.

Clearly, contrary to the originally stated and clear need to increase the payments, the new legislation decreased it.

The Slovak government itself expects that the new law will result in annual payments to the decommissioning fund to drop from an average 2,76 billion SKK in the years 2000-2005 to 1,76 billion SKK in the years 2007-2011 [Ref. 2, pages 14 and 15, highlighted].

Even calculated per reactor, the average annual payment per one 440 MWe reactor was 460 million SKK between 2000 and 2005 [Ref. 2, page 14, highlighted], but with the new legislation it dropped to 384 million SKK assuming a constant sales price of base-load electricity. If we take the electricity price increases modelled by the Ministry of Economy, it will still be as low as 439 million in 2008 [Ref. 3, page 87, highlighted].

2. This was done explicitly for the benefit of ENEL

This act by the Slovak government and parliament has, however, a very clear and well-evidenced explanation: the artificial decrease in decommissioning payments was introduced in agreement with ENEL, possibly as one of the incentives to convince it to privatise Slovenské elektrárne and invest in the Mochovce 3/4 nuclear power plant project.

Annex P of the privatization contract between Slovak state and ENEL states:

“In the period of the 1st of January 2005 to the 31st of December 2009, the annual payments to the new decommissioning fund from the side of the operators of the nuclear power plant, including both the contributions to the historical deficit and regular payments, will not exceed 2.600.000.000 (two billion six hundred million) SKK.” [Ref. 4]

This quote comes from a draft of the privatization contract that was leaked to the public. It is however clear that it exists also in the final version, although the dates are shifted by two years because the privatisation was finally approved and signed later than anticipated.

This condition that introduces a cap on the payments for ENEL has been repeatedly referred to in various pieces of official documents, such as the explanation for the parliament accompanying the proposal of the new decommissioning law:

“In the privatization contract for Slovenské elektrárne... the Slovak Republic has obliged to... limit the annual payments of operators between years 2007 and 2011... to 2.6 billion SKK” [Ref. 2, page 4, highlighted].

¹ At this moment and for the purpose of this paper, we choose not to tackle the problem of the vague definition of “selling cost of generated electricity”, but it is a matter of fact that it represents additional unclarity and a possibility to play around with figures influencing the level of annual obligatory payments. We believe that this problem also needs to be addressed in order to establish robust and transparent decommissioning legislation in Slovakia.

And that condition has been explicitly transferred to the finally approved and valid law No. 238/2006 and its § 13, section 4:

"The annual payment in the years 2007 to 2011 will not exceed for the owner of the V2 Jaslovske Bohunice and Mochovce nuclear power plants a sum of 1.85 billion SKK annually" [Ref. 5, page 10, highlighted]

It must be stressed that this goes clearly against the rationale of the need to avoid deficits and the principles of decommissioning funds – the payments must be based on objective calculations of the costs, not capped on the request of a utility.

And this is not devoid of implications. The most recent proposal of "The Strategy for the Back End of the Nuclear Cycle", submitted to the Slovak government by the Ministry of Economy in January 2008 [Ref. 3], contains the warning that:

"Developments of the base load electricity selling price from SE, and uprated installed capacity at V2 and EMO 1/2 resulting in an increased volume of generated electricity, could lead to the situation where the calculated annual payments of SE to the decommissioning fund would get over the limit of 1.85 billion SKK in years 2009 to 2011. Only modification of relevant legislation can solve this disproportion."
[Ref. 3, page 70, highlighted]

3. Low payments do not cover the expected costs

The most recent estimation of costs related to decommissioning, spent fuel storage and disposal of radioactive waste in Slovakia is 225 billion SKK [Ref. 3, page 85, the sum calculated by us from the figures on that page is highlighted]. These are costs to be all paid from the Slovak national decommissioning fund.

The same paper also assumes that future interest rates for the money deposited in this fund are adjusted for inflation, so this number can be taken as an absolute figure and expressed in the real value of Slovak currency in 2006.

If we take out the specific costs related to old reactors that are (or soon are to be) closed permanently, we end up with a cost of 74 billion SKK linked to decommissioning and spent fuel storage for the remaining reactors operated by ENEL (VVER 440/213 reactors at V2 Jaslovske Bohunice, at Mochovce 1/2 and also at Mochovce 3/4) [Ref. 3, page 85]. The proportional cost of the final waste repository needs to be added, which is roughly two thirds (6 of a total of 9 Slovak reactors) of 100 billion SKK [Ref. 3, page 85], i.e. 67 billion SKK. **This results in about 141 billion SKK of future liabilities linked to the ENEL reactors, including Mochovce 3/4.**

Assuming 40 years of operational lifetime, this means that each of the ENEL reactors should pay annually an amount equivalent to 588 million SKK (valued 2006) to the decommissioning fund. Again, this is in sharp contrast with the level of 440 million SKK introduced by the 2006 decommissioning law. **Unless the situation dramatically changes, this may result in a newly created future deficit of 35 billion SKK.**

4. The complete “historical deficit” burden put on consumers to the benefit of ENEL

The so-called “historical deficit”, accumulated in the decommissioning fund before 2006, is to be compensated by a flat payment imposed on all energy consumers in Slovakia. This mechanism has been formally established by the current decommissioning law No. 238/2006, in its § 7, section 1b). This law also states that practical arrangements will be introduced by a governmental ruling.

The recent proposal of the decommissioning strategy [Ref. 3] recommends that this fee will be defined on 90 SKK/MWh and that the decommissioning fund will be generating an income of 2 billion SKK (at the level of 2006) on this basis every year, at least between 2009 and 2015 [Ref. 3, page 74, highlighted]. It also suggests that the fee will continue to be imposed in a much longer future:

“... it is considered that the sum collected to cover the historical deficit will be distributed over a longer time period (50 years)” [Ref. 3, page 73, highlighted]

The total sum of the “historical deficit” has been currently estimated at 71.428 billion SKK [Ref. 3, page 73, highlighted]. Assuming an annual collected sum of 2 billion SKK, this would mean that all Slovak consumers would be paying this fee for more than 35 years.

It should be stressed that the fee is to be paid by everybody as additional cost of every kWh of electricity delivered to customers – i.e. will be paid also by those who do not consume electricity produced by nuclear reactors or by Slovenské elektrárne.

This is partially problematic because at least part of the “historical deficit” was created by Slovenské elektrárne during the 1990s and before 2004 - i.e. already during the time of competition and liberalising markets. By imposing flat contributions for nuclear liabilities of reactors owned and operated by Slovenské elektrárne, this creates a market distortion to the benefit of SE and ENEL.

Like the cap on annual payments, this was an arrangement negotiated between the Slovak government and ENEL, and creates part of what we see as illegal, market distorting incentives for investment in Mochovce 3/4 project.

5. Vague estimates of the “historical deficit” may take more consumer money to benefit ENEL

The suspicion of an illegal state incentive gets much stronger when various figures of the “historical deficit” are compared. In 2006, when the new decommissioning law was being passed, the government was estimating the volume of the “historical deficit” at 15 billion SKK [Ref. 2, page 15, highlighted].

Now, when the implementation of the flat fee is discussed, the Slovak Ministry of Economy comes up with a figure of 71 billion SKK [Ref. 3, page 73, highlighted] - which is almost five times bigger than was the figure presented in 2006!

This fluctuation creates a significant margin in which to conceal current or future liabilities under the label of “historical deficit”, and help SE and ENEL to transfer large parts of their costs to consumers who may be forced to pay fees accumulating to anything between 15 and 71 billion SKK.

Notes:

1 EUR was 37.50 SKK in 2006, which is the base year used in most figures and calculations

References:

- [1] “Reštrukturalizácie Štátneho fondu likvidácie jadovoenergetických zariadení a nakladania s vyhoretým palivom a rádioaktívnymi odpadmi”, document No. UV-14495/2004, Ministry of Economy, 23rd June 2006, Bratislava
in Annex, copied from
[http://www.rokovania.sk/appl/material.nsf/0/49D21BEFB2AFD0BEC1256EBD0043B97C/\\$FILE/Zdroj.html](http://www.rokovania.sk/appl/material.nsf/0/49D21BEFB2AFD0BEC1256EBD0043B97C/$FILE/Zdroj.html)
- [2] “Dôvodová správa“, as presented by Slovak Government to the Parliament, 11th January 2006, Bratislava
in Annex, copied from
http://www.nrsr.sk/exelT.NRSR.Web.Webclass/NRCPT.ASP?WCI=NRCPT_Workitem&WCE=OpenDoc&WCU=191496
- [3] “Stratégia záverečnej časti jadrovej energetiky”, Ministry of Economy, 19th December 2007, Bratislava
in Annex, copied from
[http://www.rokovania.sk/appl/material.nsf/0/79C95495D337A778C12573B7004E42D2/\\$FILE/Zdroj.html](http://www.rokovania.sk/appl/material.nsf/0/79C95495D337A778C12573B7004E42D2/$FILE/Zdroj.html)
- [4] leaked draft of Annex P to the SE privatization contract: “Principles that shall be incorporated in the nuclear decommissioning legislation”, not dated
- [5] Law No. 238/2006
in Annex, copied from
http://www.economy.gov.sk/files/Energetika/NJF/Zakon_238.pdf
- [6] Peter Mihók, “Národnýjadrový fond; genéza, problémy, modelovanie príjmov a výdavkov, odhad potrebnej výšky príjmov a odhad aktuálneho deficitu vo fonde”, Zvolen (2007), Centrum pre trvaloudržateľné alternatívy
in Annex, copied from
http://www.cepta.sk/documents/jadro/studia_ver1.pdf

Contacts:**Jan Beránek**

Nuclear Energy International Project Leader
Greenpeace International
Ottho Heldringstraat 5
1066 AZ Amsterdam
The Netherlands
tel.: +31 651 109 558
e-mail: jan.beranek@greenpeace.org

Jan Haverkamp

EU policy campaigner dirty energy
Greenpeace EU Unit
Belliardstraat 199 Rue Belliard
1040 Brussels
Belgium
tel.: +32 477 790 416
e-mail: jan.haverkamp@greenpeace.org