

# **Climate change as justification of projects harmful to the environment**

Hungary: Climate change arguments serving as justification for the extension of the nuclear power plant

Case Study

*Justice and Environment 2012*

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#### Case Study

##### I. Life extension of the blocks of the Nuclear Power Plant (NPP) in Paks

The Paks NPP is the only nuclear power plant operating in Hungary. It is nearly 100% owned by state-owned power company Magyar Villamos Művek (MVM Ltd). The Paks NPP currently consists of four blocks, each of which started to operate during the 1980's with an original lifetime of 30 years. Consequently, originally the lifetimes of all four blocks were to run out from 2012 to 2017.

Altogether, the four reactors produce more than 40 percent of the electrical power generated in the country. Given its huge importance in the electrical power supply, Hungary has extended the lifetime of the nuclear blocks by 20 years each.

##### I.1. Procedural timeline:

	Applicant/Authority	Case reference	Date
<b>Project Application</b>	PA Rt. (Paks Nuclear Power Plant Ltd.)	1934-189/2004	05.04.2005
<b>First instance decision</b>	South-Transdanubian Inspectorate for Environmental Protection, Nature conservation and Water Management	100562-023-197/06	25.10.2006
<b>Second Instance Decision</b>	National Inspectorate for Environmental Protection, Nature conservation and Water Management	14/6897/2006	31.01.2007.
<b>Judicial review</b>	Court of County Baranya	7.K.20.853/2007/7	5.11.2007

##### I.2. Argumentation in the EIA procedure

###### The environmental impact assessment

The operator submitted the preliminary environmental study of the extension of the operating time to the competent authorities at the beginning of the year 2004. After the authorities and experts had formulated their opinion and performed the necessary supplementary work, the authorities ordered to prepare and to submit a detailed environmental impact study.

Based on the preliminary impact assessment, the competent environmental authority granted the necessary environmental permission (the "2006 Environmental Permission") on November 25, 2006, in which it approved the extension of the four blocks' lifetime until 2032-2037 respectively.

In the reasoning of the first instance decision (Environmental Permission), the environmental authority referred inter alia to the expert opinion of the Hungarian Energy Office (hereinafter as "HEO") issued on August 9, 2004<sup>1</sup>.

In this opinion, the HEO expressed its intention to support the life extension of the blocks of the Paks NPP, because – according to its opinion – ***“nuclear power plants do not emit greenhouse gases, nor any other conventional depleting substances.”*** Furthermore, the HEO also stated, that ***“Nuclear energy is environmentally more beneficial than other conventional energy producing methods, because with safe operation it does not encumber the environment on a short term.”***

It is unclear whether HEO's opinion would have been any different, had it assessed the long term impact as well. Also, as it is seen from the aforementioned quotation, the HEO omitted to approach nuclear energy production in a broader context; it did not take into consideration the environmentally damaging process of mining and nuclear storage, both of which are also integrated part of nuclear energy production.

During the administrative as well as the judicial procedure the following points of the environmental impact were primarily challenged:

- Regarding the effects of operator errors, these were considered to be tolerable stay within a range of 20-24 km, even under extremely unfavourable circumstances, as far as the attenuation is concerned. As a result of a security enhancement alteration, which is going to take effect during the preparations for the extension of the operating time, the emission rates of the operation breakdowns are going to be reduced by an order of magnitude, so the area affected by the operation breakdowns belonging to the contingency planning is going to be covered by a circle with a radius of 6,3 km.<sup>2</sup>
- As the impact assessment study also stated, the main problem was the storage of spent fuel and of radioactive waste; the low and intermediate level radioactive waste is stored on-site. The place proposed for the final disposal in Bataapáti, at the southern limits of Tolna County, was characterized as suitable for this purpose; the site was examined during the environmental permitting procedure. The operator explained that interim storage of the spent fuel is solved for a period of 50 years in a facility built specially for this purpose and situated next to the site of the power plant. The management of low, intermediate and high level radioactive waste and of spent fuel (interim storage, final disposal) was not a part of the study.
- The impact assessment study concluded on the basis of the technological condition survey – inter alia - that in a small proportion of equipment and systems needs reconstruction because of aging or considerable obsolescence, in the case of some systems the extension of capacity might be necessary (eg. the storage of waste).<sup>3</sup>

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<sup>1</sup> Expert opinion of the Hungarian Energy Office no. ES-829/2/04.

<sup>2</sup> <http://paksnuclearpowerplant.com/service-life-extension> downloaded: 10/09/2012

<sup>3</sup> <http://paksnuclearpowerplant.com/service-life-extension> downloaded: 10/09/2012

- According to the calculations of the study, the range of radiological effects of operator errors related to contingency planning consists of the sectors corresponding to the timely windward within a circle with a radius of 6.3 km and a reactor unit in its centre. *“The range of non-nuclear operator errors due to the breakdown of technologies applied in the power plant, hazardous materials and hazardous waste generated covers only the security zone of the power plant. In the case of the Danube it means an area of 10-20kms down-stream.”*<sup>4</sup>

### **I.3. Argumentation in the appellate procedure and in the judicial review**

**Main objections raised by the appellant** - Referring to the possible negative impacts on the environment, the appellant raised objections (both in the administrative procedure as well as in the judicial procedure) against the planned extension of the lifetime of the blocks No. 1-4 of the nuclear power plant. The main arguments were the followings:

- since the impacted area had been calculated in the light of future adaptation of a modified technology, the calculation in the impact assessment was not correct, the area likely affected by the project would have been evaluated based on the existing conditions during the permitting procedure;
- chances of major accidents caused by unexpected, unforeseen physical and chemical processes, or by intentional injury of human activity (eg. terrorism, war situation) had not been sufficiently taken into account and assessed in the impact assessment;
- the problem of storage of nuclear waste generated by the blocks with extended lifecycle had not been solved adequately.

**Second instance of the administrative authority** - The National Inspectorate upheld the decision of the first instance beside minor modifications thereof. The reasoning explained that

- the conversion to be carried out by the applicant until 2011 is criterion of validity of the permit, thus the estimation of the impacted area might have been accepted;
- the calculation for the potential of accidents had been correct;
- the treatment and storage of low and medium activity radioactive waste is temporarily solved and the argument of the operator can be approved that the facilities for final disposal will be carried out in the future.

**Administrative court** - The Administrative Court rejected the complaint of the appellant and accepted the arguments of the environmental authorities without demur.

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## **II. Planned establishment of two new nuclear blocks**

On March 30, 2009 the Parliament of Hungary in 25/2009 Resolution gave its principal consent to the commencement of the preparatory works aimed at establishing two new blocks in NPP Paks. This process is currently ongoing and the operation of the new blocks is expected to start in 2030 the earliest.

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<sup>4</sup> <http://paksnuclearpowerplant.com/service-life-extension> downloaded: 10/09/2012

The establishment of two new nuclear blocks at NPP is currently in the preparatory phase. Therefore, the necessary permits are not yet issued or publicized. The standpoint of the Government on nuclear energy can be deduced from the Energy Strategy.

The Energy Strategy is a document approved by the Parliament, which formulates proposals to the energy sector and to decision-makers in order to harmonize Hungary's future energy need with the climate policy, while keeping economic development and environmental sustainability in mind.

According to the Energy Strategy, emission-reduction *"can be achieved by substantially increasing the share of renewable energy sources and adding new unit(s) to the Paks Nuclear Power Plant while extending the lifecycle of the existing four units. The new nuclear unit(s) to be built by 2030 will undoubtedly have a positive effect in terms of CO2-emissions."* The Energy Strategy also states, that *"nuclear power plants are almost emission-free producers of electricity"*, therefore *"they are economical and efficient tools of meeting the environmental and climate protection targets."*

### III. Conclusion

During the environmental permitting procedure and the judicial review the focus of the appeal and the action was put mostly on the risks of producing nuclear energy; the claimant referred to the insufficient evaluation of the likely environmental impacts in the extent mentioned above. The argument of climate change was not stressed in the environmental permitting procedure, but the environmental authority made its decision based on the opinion of the HEO.

In its opinion, HEO referred to the short-term impact of nuclear energy, but it did not mention the long-term impact and the standpoint of the energy authority that nuclear energy is reckoned to be "clean energy" might be easily deduced.

The Energy Strategy clearly indicates that the Government of Hungary considers nuclear power as a mean of reducing CO2 emission, thus meeting the challenges of climate change.

Taken the opinion of the HEO and the National Energy Strategy 2030 of Hungary into account, it can be stated that in justification of nuclear energy producing and the extension the life-cycle thereof, fighting against climate change is referred as basic argument on the governmental level, as well as on lower, public authority level.

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The Work Plan of J&E has received funding from the European Union through its LIFE+ funding scheme. The sole responsibility for the present document lies with the author and the European Commission is not responsible for any use that may be made of the information contained therein.

