

## **Clarification of certain data of technical solutions and their environmental impacts presented in course of the Environmental Impact Assessment procedure of the Paks II project**

### **Summary**

The Environmental Impact Assessment report (hereinafter referred to as EIA report) presenting the environmental impacts of the Paks II project (hereinafter referred to as Project, or Investment project) with the contents and in the format complies with the requirements laid down in 314/2005. (XII. 25.) Gov. Decree was submitted to the South-Transdanubian Environmental and Nature Conservation Inspectorate on December 19, 2014.

Since submitting the EIA report, MVM Paks II. Zrt. and the Russian General Contractor have continued the preparatory works on the construction of the new units. The MVM Paks II Zrt. pays special attention to the assessment and evaluation of the environmental impacts of the planned activity throughout the entire design process. Part of the data used for elaboration of the EIA report has been further specified in the design procedure conducted so far.

After this specification of certain data of technical solutions presented in the Environmental Impact Assessment procedure (hereinafter referred to as EIA procedure) some supplementary assessments were carried out in that regard, in which the technical solutions known at that time were collected and the modified impact processes were assessed and evaluated, then compared to those previously presented in the EIA procedure, including their nature, size and expected spatial extent of the environmental impacts thereof.

The results of these supplementary assessments confirmed that the nature and size of the environmental impacts have not changed to any relevant extent, and there is no change in respect to the transboundary environmental impacts either.

The supplementary assessments were carried out on the following topics:

1) In the EIA report submitted by the MVM Paks II Zrt., schedule of construction and of the commercial operation of unit 5 and 6 (2025 and 2030 respectively) differs from the schedule currently in place (2025 and 2026 respectively), as this difference has also been described in course of the national and international public hearings and consultations. Correspondingly, the document shows the environmental impacts of the parallel construction of unit 5 and 6, and of the parallel operation of unit 1 to 4 and 5-6 between 2026 and 2032.

2) As the design process has been being proceeded, the location of the units (the so-called site-layout) could be specified more accurately, therefore the spatial extent of the environmental impacts have changed insignificantly. Comparing with the data presented in the EIA report, the size and position of the operational and staging areas of the new units within the industrial economic area (hereinafter referred to as GIP area) belongs to the Paks Nuclear Power Plant, have changed slightly, furthermore the location of the new units has

been shifted to north within the GIP area according to the new arrangement. Results of the supplementary assessments carried out in that regard are also presented therein.

3) An open surface channel will be constructed in parallel with but separately from the existing hot water channel of the Paks Nuclear Power Plant in order to release warmed up cooling water back into the Danube River.

4) The position of the Paks II substation and the path of the electrical line connecting it to the new units have also been reviewed.

As a result of the alterations presented above the environmental impacts assessed, evaluated and presented so far in course of the EIA procedure have changed and new impact processes have also appeared, which concern the groundwater of the plant site, ambient air, settlement environment, population, and the flora and fauna of the power line's path and of the island situated between the cold and hot water channels. This document presents the assessed impacts affecting the environmental elements above. (The "environmental elements" are the elements of the environment that may be affected by the proposed activity; previously mentioned as "impact bearer".)

*Groundwater* is affected by the parallel construction of the units as previously mentioned and the increased drinking water demand due to the higher number of staff on site. The document presenting the results of the supplementary assessments having carried out stated that the size and position of the depression cone formed as a consequence of the dewatering operations will be also shifted 200 metres to north as a result of the relocation of the units to north. The document confirmed also that the current capacity of the four operational water works at Csámpa - extracting water from the deeper aquifer - will sufficiently cover the increased drinking water demand due to the parallel construction of the units.

Non-radioactive air pollutants impaction on the *ambient air* has also been assessed. The re-assessed and re-evaluated impact areas for the construction phase slightly differs from that presented in the EIA procedure, in certain cases - as it was presented also in the EIA procedure -respective limits may be exceeded only temporarily and in close surrounding of the operational and staging area. Comparing to that presented in the EIA procedure, air polluting impacts of a larger number and differently positioned diesel generators were assessed and evaluated. It can be stated that compared to the impacts presented in the EIA procedure there is no relevant change identified in relation to the impacts concerning the ambient air.

As for the *settlement environment*, the changes in noise pollution were also assessed, which is basically the consequence of the additional pollution resulting from the alteration of the site-layout and the timing of construction and operation. It was confirmed that the impact area will not reach any new administrative border and areas either during the construction or in the operation period compared to those specified in the EIA report. More intensive working operations carried out as a result of the parallel construction of the units might cause a slight increase in noise pollution during certain periods in comparison to those presented in the EIA report, however exceeding the night time noise emission limits applied for certain areas

-during the structural construction works - can be eliminated by restricting predominant noise emitting equipment and machinery from operation during the night hours. The noise emission limits during operation can be kept if low noise transformers are installed. Accordingly, it can be stated that there is no relevant changes in respect of the noise exposures in comparison to those described in the EIA report.

In regard to the radiological effects *population* exposed to, no changes identified, as there is no difference in the source term of the radioactive substances, the meteorological parameters taken into account for the calculations or the point of emission height compared to the data presented in the EIA report, only the location of the emission source points were altered within the site. The size of the radiological impact area is identical in all operational states with that presented in the EIA procedure, however it is shifted to a slight extent in alignment with the shifting of the emission source points. This is also valid for radiological impacts during normal operation, operational states within the design basis and for those associated with events in the design extension conditions. Accordingly, there is no change identified in comparison to the transboundary radiological impacts presented in the EIA report.

In regard to impacts on the *flora and fauna*, in course of the supplementary assessments a separated hot water canal was taken into account. It has been stated that the size of the concerned area qualified as Natura 2000 site does not increase, since the location of the structure connecting the hot water canal with the Danube remained unchanged. The concerned area within the narrow strip on the Danube bank of the island between the cold water canal and the hot water canal was assessed at the time the EIA report was elaborated and therefore it was presented as part of the EIA report. Due to the construction of the planned new hot water canal the tree stands on the island situated between the cold water canal and hot water canal will be affected, animals needing protection will be relocated/resettled before the commencement of working operations on the area concerned and their habitat will be provided in the new area in the future. With respect to the impacts on the Danube, no changes occur in comparison to that presented earlier in the course of the EIA procedure.

In summary it can be stated that the results of the supplementary assessments after the specification of certain technical solutions presented in course of the EIA procedure show that the nature and size of the environmental impacts presented earlier in the course of the EIA procedure do not change in any substantial manner, no new environmental elements can be identified and the exposure of environmental elements identified previously in the EIA report do not change to any significant extent. There is no change in respect to transboundary impacts either.