

Summary

Corruption risks of the nuclear power plant investments:
What can we expect in the case of Paks II?

1. In January 2014 the Hungarian Government announced that it reached an agreement with the government of Russia about the construction of two new units, which are to replace the current capacity at the Paks nuclear power plant. The project with its approximate volume of 3-4 billion HUF will be the biggest investment in Hungary in the next decade. As agreed the investment will be financed from credit provided by the Russian government.
2. The study analyzes the corruption risks of the planned Paks nuclear power plant investment based on relevant economic theory and empirical results, summarizes the lessons learned from similar Hungarian and foreign investments, and gives an estimate of the expected social losses related to the investment, and arising from the corruption.
3. Based on the aspects analyzed in the study, the Paks II. investment involves high corruption risks, which risks could and should be reduced. This is the vital interests of the Hungarian nation.
4. Due to the application of the new technology the investment entails such an information asymmetry that could easily be misused by the contractor. Given the nature of the huge investment it will further increase corruption risks: these big, lasting projects create a complex relationship system, for project participants (organization set up by the customer, coordinating project office, contractors, sub-contractors), both for the sellers and the buyers it means higher misuse potentials than would be in case of simpler, smaller-scale projects.
5. On the basis of theoretical economics literature on corruption, and because of project characteristics there are high corruption risks. There are only a few companies able to construct a nuclear power plant, and on the buyer's side governments may be the only customers. Bilateral monopolies based on the participation of two parties generate more opportunities for misuse both for the customer and the contractor than standard market contracts.
6. The literature on the project management of large investments and that of nuclear power plants draws attention to risks related to

the implementation of these projects. Primarily not keeping the deadlines and related budget overrun should be counted on. With establishing and maintaining appropriate project management practices these risks can be reduced.

7. In the recommendations and guideline provided by the International Atomic Energy Agency emphasis is put on the importance of using adequate resources to set up and operate organizations that control budget and monitor whether deadlines are kept in case of nuclear power plant investments. Investments implemented with the help of new technologies are increasingly more complex, therefore they involve higher risks concerning contractors and security.

8. Recent European nuclear power plant construction projects underpin/butress the rationality of these recommendations. Protracted and increasingly costly, controversial investments can be found in Finland, in France, and in Russia.

9. Experience shows, on the basis of similar big Hungarian investments that implementing such a project entails serious risks. Poor project management, legal disputes and licensing scandals, cost overruns and long overdue investment deliveries characterize Hungarian projects. In the Hungarian environment much higher level corruption risks can be calculated than that of Western Europe's.

10. The signed agreement does not include either additional work clauses or the question of penalties. The national experience has shown that most of the time delays and additional work provide opportunities for abuse. The shortcomings of the current agreement therefore provide a great scope for corrupt transactions.

11. International empirical studies on similar projects demonstrate that at least 5% of the value of the investment is exposed to corruption risks. According to Hungarian data the ratio of bribery in case of a project that is implemented with corruption can achieve 13-16% of the value of the investment. Social losses associated with corruption can amount to many times more than that. This means hundreds of billions of forints tax payer loss in case of such an investment.

12. Due to high corruption risks of the investment, Paks II. agreement on the implementation of the project needs amendments and modifications. The current structure denotes that the project is to be implemented with significant corruption losses together with a lot of corrupt project procurements.

13. Russian and East Asian experience suggests that the construction and the operation of a nuclear power plant carry high corruption risks.

14. An inverse causal relationship between the corruption risks and the safe operation of the nuclear power plant can be stated: higher levels of corruption will result in a lower level of security.

15. This relationship is exemplified by the recent Fukushima nuclear power plant accident. Corruption and misuse/abuse in the institutional control system can be detected among the causes of the accident.

16. Transparency is one of the best and most profitable means/weapons against corruption. Enforced transparency results in low corruption risks; increased transparency reduces corruption risks. Transparency may discourage potential players from corrupt transactions. Ensuring transparency, however, is not sufficient in itself: it is necessary, but it is not the adequate/sole condition for the reduction of corruption. In addition to it, there is a need for institutions that in case of public funds expenditure effectively monitor corruption risks (i); citizens participation (ii); and the work and activities of investigative journalism (iii).

17. The issue of corruption should have a high priority in the construction of nuclear power plants. As more positive examples confirm, the solution could be if apart from the investor organization an anti-corruption or compliance office, department is set up, which continuously examines and monitors procurement decisions from this aspect during the whole course of the project.

18. If only the volume, financial, technical parameters of the planned power plant investment are taken into account, as well as how the markets of the investment and how those products and services that are purchased during the investment can be characterized, then preliminary assessment, analysis of risks related to corruption should be conducted, and the results should be considered in the decision making processes of the investment.

19. This is essential, even if *a priori* good intention, willingness to compromise, fair business practices, a high level of contractual discipline are assumed in connection with each and every participant in the investment project.

20. A significant part of the corruption risks associated with an investment arises from the objective characteristics of the

investment. These factors are the following: the extremely high volume of 7-10% of the Hungarian investment by year (i) information asymmetry resulting from the application of the new nuclear power plant technology (ii); implementation characterised by bilateral monopoly (iii); from the seller's side the contractor's oligopolistic situation (iv); within the investment the substantial amount of products coming from heterogeneous and non-competitive markets, (v); Paks II. is a relation-specific investment, since the implementation of the model is closely linked to its financing model(vi).

21. Only beyond the list of objective factors is it possible and necessary to talk about what institutional solutions, what organizational solutions are set up in the autonomous decision making process during the investment by the investment procurer, the Hungarian government and the Russian partner, and what level corruption risks these institutional and organizational solutions would generate. Regardless of which solutions are chosen, they induce different levels and different intensity presence of corruption risks.

22. Consequently, the Hungarian government, and also the Russian partner could affect the level of corruption at which the investment is to be implemented. Those institutional and organizational solutions, strategic anti-corruption measures, continuous analysis of corruption risks that are based on the international big investment experience can result in low level of corruption risks linked to investment, and in the exclusion of corruption presence in several fields. This all depends on the identification of the objective situation and on the political will to resolve the issue.