



Nuclear Energy: Transferring Problems to Eastern-European Countries

The status of the European nuclear energy industry is controversial. The number of nuclear power reactors has decreased since 1989 from 179 to 146 units (April 2008) and the average age of the existing reactor fleet is constantly increasing (it is slightly above 24 years). By 2020, 45-50 reactors are expected to be shut down, while there are no relevant existing plans for replacing them. Nevertheless often the “nuclear renaissance” is heralded.

The main reason for the declining number of reactors is that on liberalised electricity markets nuclear power plants are not competitive. Due to the poor track record of the nuclear industry – the escalation of construction time and costs, often poor performance of new units –, together with the enormous capital demand and the highest specific cost (EUR/kWe) among its competitors, financial investors are deterred.

For years decision makers have been – beyond the economic problems – particularly aware of the safety concerns and the unsolved storage of nuclear waste. Combined with massive public rejection to the technology in certain countries nuclear power plants were also politically not bearable. This seems now changing due to the recently rising activism of the nuclear lobby. Their argument in favour of nuclear energy often refers to the problem of climate change, well overestimating the role which this technology could in fact play in reducing global CO₂ emissions.

The upcoming problems affect mainly the Western part of Europe, as the bigger proportion of the European reactor fleet can be found in this region, and as the average age of the units there is higher than in Eastern-Europe. (However, there are also units in Eastern-Europe which will reach the end of their original lifetime within the next ten years.)

As a solution, the nuclear industry goes East. In the former communist countries the public acceptance of nuclear power is higher than in Western-Europe. Also the state administration often favours nuclear energy. Western energy companies are planning to place new nuclear capacities in Eastern countries and export the electricity produced back to their homeland. The best example is the case of Mochovce 3 and 4 in Slovakia, where the Italian ENEL plans to finish two outdated units (based on over 30-years-old Soviet design), the construction of which was halted in the 1990s. On the other hand several Eastern governments (e.g. Slovenia, Estonia, Lithuania, Bulgaria) announced their intention to build new nuclear plants or finish previously cancelled projects. Western companies happily indicated their intention to take part.

To build these projects in the Eastern-European region could mean the survival of the industry, but it raises lot of concerns. First, constructing new units in foreign countries means transferring both safety and environmental risks to these locations. Secondly, the relaunch of ‘hang-over’ nuclear projects is planned (Bulgaria, Slovakia), and putting outdated technologies into operation even increases the safety risks. Also there are suspicions that for constructing these new units, illegal state aid would be used. As there are no significant differences in economical circumstances among Eastern and Western-European it is doubtful how nuclear could be competitive in this region. Due to the Eastern governments’ approach towards nuclear the possibility of giving green light to nuclear projects without thorough economical analyses increases. Although these countries are members of the EU where state aid is prohibited, there is the probability that later debts will somehow be transferred to the state budget.

The situation is worsened with politically approved (Paks, Hungary) and expected (Dukovany, Czech Republic; Bohunice, Slovakia) lifetime extensions of outdated, Soviet-design units in the region. The safety condition of these reactors is questionable and as no European nuclear safety standards exist, it is highly problematic to assess the actual state of the old units and also to answer the question, whether these could operate safely for further decades. Taking into account the dangers, a common European approach might be justified.