Political discussion in Western Europe on the future of Russian-designed NPPs in reform states

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Over the last decade, the debate on nuclear power in Western Europe centered on the future of the nuclear power plants of Russian technology in the former East-block countries. The topic has got additional fuel by the current talks between the EU and the accession candidates.

At stake is, however, not only the extent of nuclear power generation in reform states but also the role of nuclear power in the West or, more specifically, in Western Europe.

Chernobyl changed the world for nuclear power

The Chernobyl catastrophe of 1986 created a severe credibility gap for the proponents of nuclear power – governments, utilities, manufacturers, reactor safety institutes – in East and West alike. In the East, because the political system had failed, and the lack of safety culture had become apparent. In the West, because it seemed to prove that a catastrophic nuclear accident was more than a mere hypothesis. If it had happened in the East, why shouldn’t it also happen in the West?

Green parties and anti-nuclear NGOs recognized their chance to deal a deadly blow to nuclear power. They demanded not only the immediate shut-down of „the dangerous reactors in the East“ which they called „ticking time bombs“, but also a stop of all NPP construction in the West and a short-term phase-out of nuclear power altogether. At the beginning of 1986, there was a total of 163 NPP units under construction, 46 of which in Central and Eastern Europe, 45 in Western Europe, 47 in the Americas and 25 in Asia. At the same time, there were 355 nuclear units in operation around the world, representing an installed capacity of 263 000 MW.

It couldn’t surprise that the principal interest of the Western countries was to save their own nuclear power programs. To this end, a second nuclear catastrophe like the one at Chernobyl had to be prevented by all means. As early as September 1986, a safety conference was held in Vienna in order to study the causes of the Chernobyl accident and to establish early-warning and emergency assistance agreements. Many politicians demanded the shut-down of all RBMK and first-generation VVER plants (type V230) „as soon as possible“. The re-united Germany examined the feasibility of safety-upgrades for second- and third-generation VVERs which had been under construction in East-Germany at the time of re-unification. Contrary to what certain NGOs continue to claim, it was found out that the plants could be brought to (West-) German safety level at acceptable cost. Nevertheless the projects were finally abandoned because no investor was ready to shoulder the re-licensing risk, given the fact that a most modern plant was blocked - and continues to do so since more than ten years - by a series of court processes for formal mistakes in the licensing procedure.

Nuclear power in Western Europe regains public acceptance

The negative judgement on RBMKs and first-generation VVERs by Western governments and their safety institutes greatly contributed to reestablish credibility with the Western public. While during the first months after the Chernobyl accident public opinion in the West
was highly emotional, with a lot of media involvement beating the drums of fear and voicing doubts on the safety of Western plants, it was, later on, recognized that there were very significant differences in actual plant safety and particularly in safety culture. In discussing real and perceived safety deficiencies of Russian-design reactors, Western safety standards were taken as the unquestioned yardsticks. As a matter of fact, no power plant in the West was closed and not a single construction project was stopped as consequence of a Chernobyl-induced political decision. Opinion polls showed that a comfortable majority in Western countries again supports the continued operation of existing plants. On the other hand, no new project was initiated after 1986 in Western Europe or the Americas.

**Western assistance serving Western interests**

The collapse of socialism in the Comecon countries in 1989 and 1990 paved the way for openness and cooperation between countries that had for decades belonged to antagonistic blocks. The new democracies looked to the West for help in reforming their economies and their administrative structures. The EU set up its PHARE and TACIS assistance programs. Individual countries started bilateral programs. One of them was Germany which had benefitted so much from the political turn-around by achieving re-unification. Following a German initiative, the G7 summit in Munich in June 1992 agreed on a multilateral Action Program for improving the safety of Russian-design reactors in Central and Eastern Europe.

In its diplomatic language, the Communiqué made clear

- that assistance for short-term improvements for RBMKs and first-generation VVERs would be conditioned to commitments to a shut-down "as soon as possible" and
- that assistance for safety upgrades of newer plants would require safety studies and analyses of energy policies, energy alternatives and financing. World Bank and EBRD were put in charge of this.

In this way, the G7 governments created very strong stumble-stones to an efficient cooperation because it interfered with the energy policies of sovereign states and established complex administrative procedures. Above all, it failed to strike a balance between the interests of the G7 countries with those of the reform states. As a result, almost 8 years after the Munich G7 summit, both sides have reasons to be disappointed: None of the reactors marked "the most unsafe ones" has been closed, and none of the newer plants has been upgraded in the framework of EU or EBRD credits. However, it is highly likely that EU funds will be made available for upgrading Kozloduy 5 and 6, and it is hoped that EBRD and other credits will contribute to the completion and upgrading of Rovno 4/Khmelnitski 2. But the only upgrading projects that have been or are being implemented so far, i.e. Mochovce 1+2, Paks and Temelin, were financed privately.

**Western European NGOs oppose safety upgrades in reform states**

It should be noted that the G7 program met with strong opposition by anti-nuclear NGOs. In advance of the summit meeting of 1992, for example, 11 German NGOs had formed an "Anti-Atom-Forum" that rejected any safety improvements of Russian-designed reactors, demanding their immediate shut-down and a complete restructuring of the energy sectors of the reform states, favoring energy efficiency and regenerative energy sources. They called the Action Program a "survival program for the starving Western nuclear industry". In the following years, two German NGOs, namely BUND and the German section of IPPNW, launched a boycott campaign against Siemens in order to pressure the company to give up its nuclear activities. It had no measurable effect because the organizations evidently failed to convince major segments of the public that it served their interests if Siemens refrained
from servicing existing plants in the West and from upgrading plants in Central and Eastern Europe.

In implementing its Action Program, EU and EBRD followed consistently their goal of promoting the early closure of RBMKs and first-generation VVERs. In exchange for assistance in safety reviews at Kozloduy 1 + 2, they made Bulgaria promise to close all four V230 units by 1998. During the negotiations in 1995 on financing the completion of Mochovce 1 + 2, the Slovakian government announced the intention to close down Bohunice 1 + 2 after Mochovce having become fully commercial, but in the year 2000 the latest. The German government explicitly referred to that commitment of Slovakia when approving Hermes export credit coverage for Siemens's participation in the safety upgrades of Mochovce. In late 1995, a "Memorandum of Understanding" was signed with Ukraine on the closure of the remaining units at Chernobyl by the year 2000 in exchange for assistance in modernizing the Chernobyl-4 shelter and in improving the energy sector of the country including the completion of Rovno4/Khmelnitski 2.

**Focusing on shut-down dates**

Later on, their respective counterparts recognized they were paying to high a price regarding the failure of the West to speedily and efficiently assist them in solving their problems. Therefore, all the units mentioned are still operating, and regarding Chernobyl it is uncertain whether the 2000 deadline will be maintained.

A new round was started with the "Agenda 2000" of the EU, i.e. the invitation of reform states to join the EU. One of the conditions laid down by the EU in this 1997 document is that all NPPs operating in those states that want to be admitted have to achieve Western safety standard within 7 to 10 years. In this context, shut-down dates for VVER V230 units are again on the agenda. This time, EU negotiator Günter Verheugen is more flexible than the EU and its member governments in the past. It looks as if Kozloduy 1 + 2 would be closed before 2003, and shutdown dates for Kozloduy 3 + 4 would be fixed in 2002 in the context of an updating of Bulgaria's energy strategy. Slovakia has accepted to close Bohunice 1 + 2 by 2006 and 2008 respectively. Lithuania agreed to close unit 1 of its RBMKs at Ignalina by 2005 and to fix a date for unit 2 in 2004, probably the year 2009.

As yet, it is not clear what the requirement of "Western safety standard" will mean for the other NPPs operating in reform states. Some plants mentioned before have undergone or are undergoing major modernization programs bringing them to Western safety level. WENRA, the Western European Nuclear Regulators Association, has been put in charge of analysing the safety level of all plants in EU accession candidates. The first report, published in March 1999, has met strong criticism regarding some of their findings and is being reviewed.

One of the EU member states finds it hard to accept new members that do not share its anti-nuclear course. I am referring to Austria which promotes the concept of a "nuclear-free Central Europe" but is neighboring six countries operating NPPs, four of them being accession candidates, the other two being Germany and Switzerland. Austria has a track record of unsuccessful fights against the NPPs being operated and under construction in the Czech and Slovak republics, Slovenia and Hungary.

While 8 of the present 16 EU member states operate NPPs, 7 out of 13 accession candidates have nuclear power in their energy mix. Europe is, indeed, far from phasing-out nuclear.
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