



Ukraine and the Nuclear Power Question

Ukraine's nuclear policy has undergone several radical transformations in recent years. Anti-nuclear sentiment was rife in the late 1980s when environmentalists and other groups criticized an industry that was run directly from Moscow and appeared to take little account of Ukraine's interests or ecological concerns. In 1990, the Ukrainian parliament imposed a moratorium on the commissioning of any nuclear reactors; a decision that remained in force until revoked in October 1993, a time when Ukraine had run up a huge energy debt to Russia for imports of oil and gas. Subsequently the IAEA visited the Chornobyl plant itself in 1994, by which time only two units - the first and third - remained in operation. It concluded that the Chornobyl station was a safety hazard and should be shut down permanently. This decision was contested by Ukraine's own nuclear authorities led by Mikhail Umanets, as the chair of the State Committee for Nuclear Energy (he was relieved of this post early in 1996), and the current director of the Chornobyl plant, Serhiy Parashyn.

In various statements and articles, Umanets and Parashyn have tried to emphasize that Chornobyl in the mid-1990s is a very different proposition to the station in 1986. Safety standards have improved; the shutdown time has been drastically reduced; training of operators has been stepped up, and strict rules imposed about conducting experiments; and the uranium enrichment of the reactor has been increased from 2.0 to 2.4%. Chornobyl, declared Parashyn in an unguarded moment, is the safest of all the RBMKs in the former Soviet Union. But only Chornobyl is warranting close international attention. There is no pressure on Russia and Lithuania to close down their stations - the RBMK in Lithuania in fact provides over 70% of that country's electricity. The position of the Ukrainian representatives was necessitated partly by the fact that from October 1994 to March 1995, nuclear energy in Ukraine produced 42 billion kw/hrs of electricity, or 44.5% of all electricity produced in the country over that period.

Ukraine has inherited the Chornobyl problem from the Soviet regime. In this sense its request for international aid is legitimate. The Ukrainian authorities have estimated that a figure of US\$4.5 billion is needed to remove Chornobyl from the grid, recover the damaged reactor, and commission energy units to compensate for the loss of Chornobyl. In December 1995, Ukraine's Minister of Environment and Nuclear Safety, Yuriy Kostenko, signed an agreement with the G-7 countries in Ottawa (Canada being the current chair of the G-7), which stipulated

that Chornobyl will be closed by the year 2000. The agreement, however, has not resolved either the financial or the energy problems which Ukraine currently faces. Moreover, the \$4.5 billion price tag has been quietly shelved. Ukraine has been offered only \$500 million in grants and \$1.8 billion in loans from the G-7 nations.

Ukraine has been rendered something of an international scapegoat by the Chornobyl disaster. Its nuclear industry is in a state of disarray. Safety regulators have worked months without being paid, a potentially disastrous situation, and there has been a general exodus of skilled operators to Russia, including 8,500 in the period from Spring 1993 to Spring 1995, mainly because Russian wages are higher than those in Ukraine. Accidents at Ukraine's nuclear power stations are frequent: for example, the Zaporizhyan station, a water-pressurized (VVER) reactor, which recently commissioned a sixth reactor making it the largest station in Europe, had two accidents in the first week of December and generally has the poorest safety record of any plant in Ukraine.

Energy needs have become paramount, yet none of the solutions being posed for the loss of Chornobyl - which provided 6% of all Ukraine's electricity in 1995 - are satisfactory. The possibilities are as follows:

1. A coal-fired thermal power station in the area close to the town of Slavutych - potentially disastrous both because of the unreliability of coal supplies and the high pollution levels at such plants.
2. A gas-fired thermal power station at the same location - also implausible because the gas would initially come from Russia, thereby raising Ukraine's debts.
3. A station based on the above prognosis but located at the site of the half-constructed nuclear power plant at Chyhyryn, a site originally rejected on the grounds that it was located in an area of national historical interest, the site of the former Hetmanate.

Other possibilities have been cited, most notably the commissioning of new reactors at other Ukrainian nuclear power plants, particularly Khmelnytsky and Rivne, but also further expansion at the massive energy complex at Mykolaiv. The organization Greenpeace has maintained that the loss of Chornobyl could be compensated by a stringent program of energy conservation, particularly in industry which could contribute about 80% of the necessary savings.

Finally the question of the sarcophagus has not been resolved. The current cover over the fourth reactor is not expected to last more than another decade. Huge cracks have appeared in the concrete and the deputy director of the Chornobyl plant production association, Valentyn Kupniy, has expressed

his concern over the lack of stability of the existing unit. The high radiation levels within the complex of around 10,000 roentgens per hour render even a 10-minute visit to the reactor potentially fatal. Umanets once again has assured the public that there is no danger of a massive release of radioactive dust into the earth's atmosphere, but difficulties remain. A consortium called "Alliance" has been selected to plan a new cover - a "Sarkofag-2" - but there is considerable concern over how such a cover can be erected without the closure of the Chornobyl-3 unit, which is directly connected to the destroyed fourth unit.

Conclusions

As the above picture indicates, the current problems engendered by the Chornobyl disaster of 1986 have been overwhelming. They are exacerbated by Ukraine's current economic predicament that has seen a significant drop in the standard of living, industrial unrest, and international pressure to take immediate action toward the closure of Chornobyl. No such pressure was ever directed towards the former Soviet government, which restarted the Chornobyl station only six months after the accident. Ukraine has worked hard of late to raise its standing internationally. In November 1995, it was formally accepted into the Council of Europe, ahead of Russia. It has avoided strenuously any commitment to a military and security union within the CIS, yet has opposed the further expansion of NATO. It is thus performing a balancing act between NATO on the one hand, and Russia on the other.

At the same time, the Chornobyl question remains. The accident casualty figure is mounting, while health concerns generally are compounded by those related to the disaster. The current pessimism of Ukraine's Ministry for Chornobyl regarding the state's inability to meet the costs of the accident is both comprehensible and realistic. Chornobyl is a disaster that must be confronted on a world scale. All the evidence, however, points to a decline in nongovernmental aid, while G-7 support is considerably less than required. Ultimately the West has to bear in mind that the tragedy occurring in Ukraine today - in health terms, its manifestations are wider than those of Chornobyl and its affected regions - is primarily an inherited one. Conversely, the Ukrainian government has to acknowledge that some Ukrainian nuclear power plants (Chornobyl, Rivne, Zaporyzhia), like others in the region, have a lamentable safety record and low worker morale. Both factors render a future major accident a serious possibility.