



## Ukraine, 12 years after

David Marples

To cite this article: David Marples (1998) Ukraine, 12 years after, Bulletin of the Atomic Scientists, 54:4, 15-64

To link to this article: <http://dx.doi.org/10.1080/00963402.1998.11456856>



Published online: 15 Sep 2015.



Submit your article to this journal [↗](#)



View related articles [↗](#)



Citing articles: 1 View citing articles [↗](#)

A much-needed Budapest-Bucharest highway is in the works. Hungary is now Romania's unlikely ally, supporting its membership in the Central European Free Trade Area and its NATO candidacy.

But much of the credit for the successes to date really goes to ordinary Transylvanians, most of whom seem more committed than ever to protecting their region's rich multicultural heritage.

"All the older [Hungarian] people want to speak only about Hungarian language and Hungarian culture,"

Orban was saying. "But the younger generation is interested in French, German, Russian, and all sorts of other cultures. We're not interested in these nationalistic debates."

Outside the window a young peasant couple was smooching behind an unhealthy looking chestnut tree. "We're Transylvanians," Orban continued, "We've always mixed cultures here." ■

*Colin Woodard writes for the Christian Science Monitor. He lives in Washington, D.C. and Wiscasset, Maine.*

East and West. Ukrainian president Leonid Kuchma announced in early May that it was now highly unlikely that the Chernobyl station would be shut down by the year 2000, as had been agreed with the G-7 countries in 1995.

Ukraine has often seemed ambivalent about losing production at Chernobyl and shaky about its commitment to the schedule for closure. Although the three remaining Chernobyl reactors are also shut down, Unit 3, which shares a common control room with the destroyed fourth reactor, was scheduled to be restarted in early May. But the Ukrainian government agreed to delay any decision about the restart until well after an EBRD conference in Kiev (Kyiv) in late May.

There has also been discussion about reviving Unit 2 (shut down since a fire in 1991), partly because of the need to employ workers at Slavutich, just over the border of Kiev province in the Chernigov (Chernihiv) region. Ukraine is loath to leave another ghost town in the north and raise the number of its unemployed, and its leaders have denounced what they see as delays in promised credits from the West for the dismantling of Chernobyl.

Ukraine must also address the problem of building a new roof over the fourth reactor. The present edifice, erected rapidly after the 1986 accident, was estimated to have a life span of 10 years. Although there is little chance of an accident on the scale of the one in 1986, radioactive dust could eventually be released into the local area if an adequate roof (or re-covering, as it is described in the Ukrainian press) is not constructed.

Adding to the chaos around Chernobyl, plant director Sergei Parashin was abruptly dismissed from his post in early May after complaining to the Ukrainian government about the poor safety record of the state nuclear energy body, Energoatom.

Before he was fired, Parashin had frequently complained that international double standards were being applied to Ukraine's controversial station. A particular grievance was the lack of attention given to the Kursk nuclear

## CHERNOBYL

# Ukraine, 12 years after

*By David Marples*

THE LEGACY OF THE NUCLEAR DISASTER at Chernobyl (Chornobyl)—which marked its twelfth anniversary on April 26, 1998—continues to hang like an albatross around the Ukrainian nuclear scene. Lacking the financial resources to shut down the plant for good or to complete construction of two new nuclear stations, Ukraine occupies an uncomfortable position between East and West—accommodating competing agendas while trying to do what's best for itself.

The nuclear power industries in Russia and Ukraine have experienced

*David Marples is the director of the Stasiuk Program on Contemporary Ukraine at the Canadian Institute of Ukrainian Studies, University of Alberta. His most recent book, co-edited with Marilyn J. Young, is Nuclear Energy and Security in the Former Soviet Union (Westview Press, 1997).*

difficult times since the fall of the Soviet Union, and Ukraine depends on energy imported from Russia. In 1995, Ukraine committed itself to a five-year timetable to close down Chernobyl permanently, but this schedule was contingent on two assumptions: That the West, and particularly the European Bank for Reconstruction and Development (EBRD), would finance the completion of two new reactors at the Rovno (Rivne) and Khmelnitsky (Khmelnitsky) stations in northwest Ukraine; and that it would arrange financing for the construction of the new roof over Chernobyl's Unit 4.

On February 20, however, the EBRD decided not to fund eight of the 13 projects put forward by Ukraine for its future nuclear growth. Russia promptly offered to help Ukraine complete these projects with a \$200 million technical loan, an act that illustrated Ukraine's unusual situation between

station in Russia, a twin to Chernobyl, which has a fifth 1,000-megawatt unit scheduled to come into service next year. Other RBMK reactors continue to operate at Sosnovyi Bor (St. Petersburg) and Smolensk, as well as in Lithuania, where the Ignalina 1,500-megawatt plant has two reactors on line. (The EBRD has said that this station can continue to operate safely into the twenty-first century. It accounted for 81 percent of Lithuania's total electricity output last year.)

## The Bushehr dispute

At the same time this spring that Russia was offering \$200 million in loans, Ukraine found itself in the middle of an international dispute over the construction of the Bushehr nuclear power plant in Iran, a pressurized-water reactor station with four 1,073-megawatt capacity reactors. Russia's Zarubezhatomstroy had been contracted to build the third and fourth reactors for the plant, and the Russian firm subcontracted with Ukraine's Turbo-atom factory in Kharkov (Kharkiv) to build a \$45 million turbine for the Iranian station.

In subsequent U.S.-Russian discussions, the Americans made it plain that they opposed the nuclear power project and that the United States would not tolerate Russian exports of military technology to Iran. Russia responded that the technology transfer was exclusively for civilian use, and that because Iran was a member of the International Atomic Energy Agency, its nuclear plant was subject to international inspections.

The dispute heated up in mid-February when then-Minister of Atomic Energy Viktor Mikhailov said that Russia would assume responsibility for building the entire second stage of the Bushehr project (initially many of the auxiliary structures were to have been built by Iran). Two weeks later, after a meeting of the Iranian-Russian intergovernmental commission on economic cooperation, Russia confirmed the agreement to build the third and fourth reactors.

Then on March 2, Mikhailov, one of

the more hawkish members of the Yeltsin administration, resigned his post at Minatom, ostensibly to concentrate on research, and was replaced by Yevgeni Adamov, a well-known nuclear researcher. Although Russia's defense ministry has generally cooperated with the United States in the monitoring of nuclear weapons and non-proliferation projects, Minatom—which shares jurisdiction over this part of the Russian military-industrial complex—has acted the part of an unreconstructed Cold Warrior, despite its sensitive role as the ministry responsible for the storage of weapons and fissile materials.

The situation took another turn on March 10, when then-Prime Minister Viktor Chernomyrdin announced that the 64-year-old Mikhailov had accepted a new post as first deputy atomic minister and chairman of the Scientific Council, also attached to Minatom. His spell of unemployment thus lasted eight days. But the position of atomic minister was subject to President Boris Yeltsin's general "purge" of his cabinet in late March, and the position was again vacant at the time of this writing.

Although U.S. pressure on Russia was unavailing, Ukraine proved an easier target because of its anxiety about receiving the second half of a foreign aid package worth \$225 million. On March 7–8, U.S. Secretary of State Madeleine Albright held talks with President Kuchma and Foreign Minister Genady Udovenko, after which Ukraine announced that it had decided not to fulfill its part of the agreement for the Bushehr plant. The decision caused considerable turmoil in Ukraine, not the least at Turbo-atom, whose managers said that Kuchma gave in to the United States and "stabbed in the back" Ukraine's Russian partners.

It had been a risky move for Kuchma. Just before the parliamentary elections in Ukraine, he had deprived a major Kharkov firm of contracts worth far more than \$45 million (Russia had promised that other subcontracts would result from the deal). The success of the Communists in the election—in which they received about 27

percent of the popular vote—reflected the dissatisfaction with the Kuchma administration in the industrial districts of eastern Ukraine.

Nevertheless, Ukraine did not emerge empty-handed from its humiliating retreat. Udovenko and Albright announced the signing of a 30-year agreement on nuclear cooperation, under which U.S. companies will assist the completion of the new reactors at the Rovno and Khmelnytsky nuclear plants.

Both Iran and Russia responded to Ukraine's move. Iran declared Ukraine an unreliable partner unable to stand up to U.S. pressure. Russia acted more gently, but the restoration of Mikhailov and the announcement that its specialized factory in St. Petersburg could take over construction of turbines for Bushehr demonstrate Russia's willingness to resist U.S. pressure to halt the exports of allegedly dangerous technology, particularly in light of what occurred in Ukraine.

## The future

All of these events are complex because they are so closely intertwined with international politics, but some conclusions may be drawn:

First, Ukraine's energy plight will remain desperate unless it receives help closing Chernobyl and can begin generating electricity from the two new reactors. (Currently, nuclear power accounts for 47 percent of all generated electricity in the country.) Ukraine's ability to act is hampered by its frustration with the West over what is perceived as insufficient aid (the EBRD case) on the one hand, and the need to maintain a close partnership with the United States on the other. That Kuchma should have taken the risk of losing a profitable deal for a major company on the eve of an election only illustrates the significance of Ukraine's ties to the United States.

Second, while Russia remains resistant to U.S. pressure, a clear distinction should be drawn between the Defense Ministry and Minatom, both of which have jurisdiction over nuclear

See **REPORTS**, page 64



tion systems. Of particular interest to today's reader, Zachary describes how Bush's ideas for the memex and an automated information retrieval system presaged the advent of the Internet. But more than just a scientific genius, Bush had an extraordinary ability to envision the various uses of his inventions and the political will to turn his visions into reality. "The most politically powerful inventor since Benjamin Franklin," as Zachary writes, Bush forced the country's top policy-makers to acknowledge the strategic potential of scientific research.

In his essay *Science—The Endless Frontier*, written in 1945 on the eve of the Allied victory, Bush skillfully argued that national security was intimately connected to the country's scientific and technical progress. It was an idea that gave rise to his most enduring legacy, the foundation of a federally funded research and development establishment that continues to this day. ■

---

#### REPORTS *Continued from page 16*

weapons. On March 16, Russia reaffirmed its commitment to the Bushehr project, but its position since the departure of Chernomyrdin is unclear.

Third, Ukrainian-Russian relations have experienced a number of undulations, but Russia's approach toward its neighbor is more cautious than it was a few years ago. The signing in 1997 of the Treaty of Friendship and Cooperation, and the signing at the February 26–28 summit in Moscow between Presidents Yeltsin and Kuchma of a 10-year agreement for economic cooperation, particularly in fuel, metallurgy, and the missile industry, all suggest that ultimately Ukraine and Russia will become close partners again. The success of the left in the Ukrainian election should only enhance this relationship.

The Iranian problem indicates that Ukraine may find it increasingly difficult to tread the delicate and often precarious path between the former and present superpowers as a neutral and nonaligned state. ■

planning that is imperative to survival. With *The Eleventh Plague*, Leonard Cole renders the complexity of formulating effective responses more broadly appreciable. ■

---

*Barry Kellman is director of the International Criminal Justice and Weapons Control Center at the DePaul University College of Law in Chicago.*

## Book note

### **Endless Frontier: Vannevar Bush, Engineer of the American Century**

By G. Pascal Zachary  
Free Press, 1997  
512 pages; \$32.50

Scientist, engineer, entrepreneur, and inventor, Vannevar Bush stands as one of this century's most influential and important figures. As chief adviser to President Franklin Roosevelt on military research during World War II, Bush oversaw the development of everything from radar to the atomic bomb and almost single-handedly placed science and technology at the forefront of U.S. national security policy. Under his demanding and often autocratic tutelage, the Office of Scientific Research and Development united technological innovation with military planning, eventually giving birth to what has come to be known as

the military-industrial complex.

G. Pascal Zachary, a senior writer at the *Wall Street Journal*, describes the many features of Bush's legacy, detailing his journey from Tufts University and the Massachusetts Institute of Technology to Los Alamos and the explosion of the first atomic bomb. Using interviews with family members and former associates and relying heavily on Bush's own writings, Zachary does an exceptional job personalizing the dictatorial and arrogantly technocratic man behind the myriad inventions.

What emerges from the portrait is a complex and often contradictory personality, a man whose incredible drive for power was tempered by his own disillusioned reactions to the things he had wrought. We read, for example, of Bush's effort to develop the atomic bomb and his subsequent fears of a nuclear arms race and secret appeal to President Harry Truman against testing the hydrogen bomb; his engineering of the carpet bombings of German and Japanese cities, and the anguish and nightmares that assailed him afterwards; his conservative, technocratic politics that led him to question the possibility of democracy in post-war America, and his later campaign against the "Red Scare" and his defense of J. Robert Oppenheimer.

A polymath and technological visionary, Bush designed and built the most powerful computers of his day and foresaw the evolution of the personal computer and modern informa-