

industry to enter into potentially large markets for civilian goods and services. Members of Congress have generally supported the CTR program; indeed, the concept of payment for reduction of threat and weapons capability may be one reason why the bilateral arrangement between the DPRK and the United States has not been subject to Congressional calls for its abrogation.

The Cooperative Measures Program

The Cooperative Measures Program, which includes the CTR, is a program of interaction with the nuclear weapons infrastructures in Russia, other republics of the former Soviet Union, and China. With the exception of the CTR funding, which is managed by the Department of Defense, it is funded through the Department of Energy (DOE). The DOE programs have emphasized nuclear warhead and fissile materials safety and security; control of nuclear warhead technology and materials; dismantlement and disposal technologies; technical dialogue between U.S. labs and FSU institutes; and industrial partnering, with an emphasis on conversion of FSU nuclear weapon institutes to commercial enterprises.

The objectives of the Cooperative Measures Program might well be also thought of as the evaluative criteria by which the program could be judged. They are to: prevent the transfer of nuclear weapons, materials, and expertise to proliferant nations; promote openness and transparency; foster cooperative approaches to solving common problems in reducing the danger of nuclear weapons; reduce activities in the FSU which threaten national and international security; promote defense conversion; and gain access to high quality science, technology, and test facilities.

It has recently been announced by the Department of Energy that the United States will provide \$1 million for a new trilateral initiative to verify that fissile materials once produced for its and Russian nuclear arsenals are not reused to produce new nuclear weapons; the IAEA is the third party to the agreement. In addition, Russia and the United States have signed a cooperative agreement in which scientists and engineers from Russian nuclear institutes will work with Sandia National Laboratories and the Department of Energy's Albuquerque Operations Office to administer the Russian American Fuel Cell Consortium (RAFCO). RAFCO capitalizes on both countries' research programs on fuel cells which take energy released by catalytic oxidation of a fuel and convert it directly into electricity. With high-energy efficiency and nearly zero emissions, fuel cells are attractive for remote power needs. RAFCO supports expertise in each country, accelerating development of these fuel cells for emerging markets.

Russian scientists and engineers have responded with enthusiasm to the initiatives taken by their U.S. counterparts. Involving the Russian laboratories in cooperative projects permits Russian nuclear weapons experts to further their country's nonproliferation goals, thus enhancing national security; at the same time, the scientists and engineers are working on projects that help the Russian domestic economy by moving its technologies into commercial areas, such as projects in energy, the environment, biotechnology, and nuclear reactor safety.