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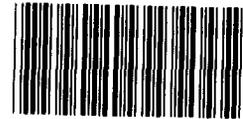


United States
General Accounting Office
Washington, D.C. 20548

General Government Division

B-248746

June 4, 1992



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The Honorable Joseph R. Biden, Jr.
Chairman, Subcommittee on European Affairs
Committee on Foreign Relations
United States Senate

Dear Mr. Chairman:

As you requested, we are providing information on (1) air pollution caused by fossil fuel production and processing within the Russian Federation, (2) the factors limiting the Russian Federation's efforts to reduce this pollution, and (3) the assistance currently given to the Russian Federation by U.S. government agencies and obstacles to promoting U.S. trade with and investment in the Russian Federation.

BACKGROUND

Environmental degradation is evident throughout the former Soviet Union. In 1988, during the Gorbachev regime, the USSR State Committee for Environmental Protection (Russian acronym: Goskompriroda) was created. This agency was supposed to replace a hodgepodge of state committees and ministries that shared responsibility for environmental policy; however, it lacked sufficient political authority and financial resources to effect major reforms. Since the breakup of the Soviet Union, Goskompriroda has been dissolved, and each republic has become responsible for its own environmental policy.

AIR POLLUTION CAUSED BY THE ENERGY SECTOR

Activities involving the production and processing of fossil fuel have been significant contributors to air pollution within the USSR. As observed by Goskompriroda in 1989, the bureaucratic treatment of natural resource planning contributed to the depletion, wastage, and contamination of

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natural resources. In addition, energy prices set below world market levels discouraged energy conservation.

According to data provided in Goskompriroda's 1989 Report on the State of the Environment in the USSR,¹ 62-million tons of pollutants from stationary sources (e.g., industrial facilities) and 36 million from nonstationary sources (e.g., vehicles) were emitted into the atmosphere in the USSR. Energy-related activities accounted for at least 38 percent of air pollution from stationary sources and resulted in emissions of sulfur and nitrogen oxides, hydrocarbons, ammonia, and particulates. Activities related to the production of electricity alone accounted for 25 percent of air pollution from stationary sources. Other energy-related activities, including those connected to petroleum and petrochemical processing and the coal and gas industries, collectively accounted for about 13 percent of emissions from stationary sources.

Soviet ministries had few incentives to conserve natural resources or equip their enterprises with pollution control technology. Their use of production targets in economic planning discouraged consideration of how production might affect the environment, and they seemed to consider the use of pollution control equipment an impediment to meeting production targets because it lowered productivity. In addition, as one U.S. environmental expert observed, pollution monitoring was often the responsibility of the ministries that actually created the pollution, and violation of environmental laws was tolerated as long as planned output was generated.

¹Goskompriroda's 1989 Report On the State of the Environment in the USSR was the first domestic document to present systematic data on the environment. Although the document is a few years old, the U.S. Environmental Protection Agency still considers it one of the best English-language sources on pollution in the former Soviet Union.

As noted in a recent study of the Soviet economy,² the pricing method employed in the planning system reinforced the disincentive for environmental protection measures. Under the Soviet planned economic system, the government set most prices on goods and services. The government effectively subsidized production costs by setting energy prices artificially low in comparison with world market prices. The undervaluation of energy within the Soviet economy resulted in excessive energy use and waste because enterprises had no incentive to conserve energy.

FACTORS HINDERING THE RUSSIAN FEDERATION'S RESPONSE TO ENVIRONMENTAL PROBLEMS

According to environmental and Soviet experts we interviewed, the Russian government is not prepared to invest large amounts of capital in environmental technology at the expense of urgently needed food, medical, and oil production supplies. Although western technology would offer the former Soviet republics the combined benefits of increased energy efficiency and access to the latest pollution control technology, the Russian government does not have the financial resources to meet all its competing demands. Furthermore, retrofitting pollution control equipment on plants outfitted with obsolete technology is not considered cost-effective.

Many of the people we interviewed, including representatives of the U.S. government, the private sector, nonprofit environmental groups, and the World Bank, believe that the former Soviet republics have higher priority needs for scarce foreign exchange than the purchase of environmental technology. Primary among these needs are food, medical supplies, and consumer goods; oil production equipment; and

²A Study of the Soviet Economy, prepared by the staffs of the International Monetary Fund, the World Bank, the Organization for Economic Cooperation and Development, and the European Bank for Reconstruction and Development (Paris: 1991).

spare parts and raw materials needed to avoid further declines in industrial production. In recognition of the Russian Federation's predicament, some of the people we interviewed recommended low-cost measures, such as those resulting in increased energy efficiency, to effect an initial reduction in air pollution.

As indicated by a recent study prepared for the U.S. Department of Commerce,³ the dilapidated condition of the technological base also serves to dissuade Russian manufacturers from investing in pollution control technologies. These technologies are not considered cost-effective because they create additional expense without increasing the efficiency of the processes. Managers interviewed at plants in Russia believed that the best method of solving air pollution problems would be to completely retool their industries. The study also indicated that many Russian enterprises were not used to purchasing their own equipment and that relatively few enterprises could identify local or foreign companies from which they could purchase pollution control equipment.

U.S. GOVERNMENT EFFORTS TO HELP THE RUSSIAN FEDERATION
REDUCE POLLUTION

U.S. government agencies have initiated programs in the Russian Federation to promote energy efficiency and reduce pollution resulting from fossil fuel production and processing. While these activities benefit the environment, increased energy efficiency also serves to alleviate domestic hardships caused by energy shortages and increase the amount of energy available to export for hard currency. Activities to promote U.S. private sector trade with the

³The Need for Air Pollution Control Equipment in the Russian Republic, Report for the U.S. Department of Commerce by FYI Information Services and Cooperative Reserve Dnepropetrovsk, Ukraine (Washington, D.C.: July 1991).

Russians and investment in environmental technology have been limited because of obstacles posed by economic and political conditions within the Russian Federation.

The U.S. Environmental Protection Agency (EPA) has recently initiated new projects in energy-related areas in addition to research projects started as part of its 1972 environmental agreement with the Soviet Union. One project, started in 1991, involves introducing integrated resource planning (IRP) to the electric utility companies of the former Soviet Union. IRP is a planning system that U.S. electric utilities use to eliminate inefficiencies in planning operations. It involves the development of a computerized model simulating the many factors affecting utility management. To justify funding this program, EPA noted that electricity production accounted for about 25 percent of all stationary-source pollution emissions in the former USSR.

EPA and the Department of Energy, along with the World Wildlife Fund and Conservation Foundation, have contributed funds to support the Moscow Center for Energy Efficiency. This center was created by Battelle Northwest Laboratories in September 1991 to encourage the former Soviet Union to incorporate energy-efficiency measures as part of its transition to a market economy. The benefits of energy efficiency to the Russian Federation would include energy savings and air pollution reduction. Battelle has identified several ways in which the electricity generation and energy sectors could improve their efficiency.

Furthermore, the Agency for International Development (AID) has initiated a program to (1) improve the efficiency of district heating systems serving residential and industrial customers and (2) provide technical assistance for and training in energy price and market reform, in conjunction with the World Bank. This project was announced in January 1992 as part of the energy efficiency initiative during the U.S. Coordinating Conference on Assistance to the New Independent States. Based on its experience in Eastern Europe, AID believes that the district heating project could quickly result in low-cost energy savings.

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Although the Department of Commerce has promoted some manufactured products in the former Soviet Union, its activities have not focused on environmental technology because of limited demand for these products. Agricultural exports, rather than manufactured products, made up the bulk of U.S. exports to the former Soviet Union. Furthermore, as Commerce reported in March 1992,⁴ the U.S. business community is generally hesitant to trade with or invest in the Russian Federation because of what it perceives as a chaotic business climate with enormous political and economic risks that seem disproportionate to the likely rewards.

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Please contact me on (202) 275-4812 if you or your staff have any questions concerning this correspondence. You may also contact Elliott C. Smith, Assistant Director, on (202) 275-1554.

Sincerely yours,



Allan I. Mendelowitz, Director
International Trade and Finance Issues

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⁴Obstacles to Trade and Investment in the New Republics of the Former Soviet Union, U.S. Department of Commerce (Washington, D.C.: Mar. 1992).