

Good Prediction, Bad News

Economists, like lawyers, are frequent victims of the unkind use of humor. What easy targets they are! It is the economist's lot to predict the future, in a world in which circumstances and human motives refuse to stand still. So when an economist, especially one who stands naked on the public policy stage, gets a call right, he deserves applause. Therefore let's hear it for Joseph Stiglitz who, as chairman of the Council of Economic Advisers in the Clinton administration, argued in the mid-1990s that the privatization of the United States Enrichment Corporation (USEC)—then a government entity—would be a bad idea. Current events validate his prediction with a vengeance and should be of deep concern to scientists and policy-makers.

Here is the condensed history of a strange, tortuous episode. USEC was established in 1992, just as the Soviet Union was falling apart. It was a government-controlled corporation, devised by Congress to take over the Department of Energy's task of producing enriched uranium. From the beginning, it was an experiment in the evolution of privatization, in accordance with the prevailing market mantra that private entities working for their shareholders do things more efficiently than governments can. After the collapse of the Soviet Union, USEC undertook a new mission. It resulted from a suggestion by MIT physicist Thomas Neff, who later received the American Physical Society's Szilard Award for Physics in the Public Interest. Under a U.S.-Russian agreement that came to be called "Megatons for Megawatts," USEC would purchase lower-grade fissionable material for nuclear reactors, obtained by down-blending bomb-grade uranium from Russian warheads. It looked like an attractive deal all around: Russia got significant income and kept a stable of scientists busy, and USEC got material to sell to utilities. The arrangement called for USEC to accept, over a 20-year period, about 500 metric tons of the weapons-grade uranium; it would then be able to supply about half of the uranium used by U.S. nuclear power plants, thereby accounting for 10% of U.S. electric power needs.

But that's not the best part of the deal. The best part, in the view of the security community and the scientists who have advised it, was that the agreement would help keep the stuff out of the wrong hands. Terrorists and rogue states would like to have weapons-grade uranium; Russia's sites were notoriously lax, and money would surely be offered for diversion. Transferring the material to peaceful uses through this mechanism provided the strongest protection against that security risk.

The agreement followed a bumpy early course, with disagreements over price and other issues. Meanwhile, privatization was moving toward approval by a combination of congressional pressure, misleading accounting that made the proceeds of the sale look like a revenue gain, and simple inertia. Within the Clinton administration, privatization faced only token opposition, save for Stiglitz, who told the *Washington Monthly* well before the sale to investors was closed: "You don't have to use a lot of imagination to see that the economic incentives are not there for USEC to import the Russian uranium. So you're putting something that's in our national security interests in direct conflict with USEC's private property interests."

As this issue of *Science* went to press, the parties were locked in yet another stalemate over the price for delivery of down-blended Russian uranium to USEC. This time USEC has said that it won't take the material unless the Russians accept its lower price terms. Why should it? Its other work has better profit margins, and its managers (including several former government employees who were rewarded with good jobs for urging privatization) have a fiduciary duty to the shareholders. But as the profits rise, the proliferation risks grow, and national security will suffer—just as Stiglitz had predicted.

It is worth noting that since September 11, some of our national enthusiasm for turning everything over to the private sector has faded; see, for example, the spasm of second thoughts about the airline security mess, another instance in which national security interests and the profit motive collide. This loss of innocence about markets is a good thing: They are fine in their place, but when market incentives conflict with national security, security should come first. The government probably can't repossess USEC, but it must make it behave.

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