

Energy Insider by William Engdahl

Nuclear power in the Comecon

*Installed capacity is certainly greater in the United States—
but we have fallen behind the U.S.S.R. in every other respect.*

It is fashionable these days especially in certain corners of the Defense Department to argue for withholding certain technologies from the Soviet Union as a way to put economic pressure on that particular part of the world.

While a convincing case can be made that the sum of all our "sanctions" since Jackson-Vanik and Jimmy Carter have been to shoot ourselves in the foot, I want to focus attention on a little-known aspect of Comecon nuclear power development.

Most of what follows is based on Western sources. The most comprehensive unclassified review has been done by the Los Alamos National Laboratory in New Mexico by William G. Davey.

Overall, Davey concludes, "the inescapable conclusion is a major commitment by the Soviet Bloc to the widespread use of nuclear energy whenever and in whatever form is advantageous. It is not viewed as an energy form that must be used reluctantly, but as a well-proven boon that can be used to replace more expensive and depleting energy from other sources."

Right now, the U.S.S.R. itself has somewhat more than 14 gigawatts of installed nuclear capacity. Eastern European Comecon countries have about 3 GW more for a total of some 17 GW of nuclear electrical generation. Compared with some 55 GW of nuclear power for the United States, we might feel

complacent, especially if we consider problems with ongoing construction. (Thus a Radio Free Europe press wire from Jun 23 was titled, "The [Soviet] plan for construction of nuclear power plants falls behind schedule.")

I asked Davey to comment on this. He pointed out that "it fundamentally is not a race, or should not be, but a question of what they are actually doing. The Russians are quite open and public about the problems in the nuclear program. But one conclusion I found inescapable, they are going like hell to build up their nuclear-power generation, and that's a fact."

Until now, as Davey's analysis shows, the overall Soviet nuclear program has been characterized as testing and sorting the optimal reactor design from several different types and sizes, starting with a smaller 440 megawatt size in the 1960s as a spin-off of their nuclear submarine experience, much as we did. Now, 1,000 MW is the average-sized unit as in the United States with plans clearly indicating the conclusion of a 1,500 MW standardized pressurized water reactor design in the next several years. The Soviets do not suffer the need to make certain political concessions to an hysterical anti-nuclear lobby. As a result, as Davey points out, "nuclear plants not only have no separate containment structure, but are situated where needed, and not, for example, remote from cities."

With the advantage of centralized planning, whatever the Soviet problems in that sphere, it is clear that the situation is primed for exponential growth. "Constraints will be only such factors as the rate of increase of electricity production," Davey concludes. So, with 14 GW nuclear electricity today, he calculates that by the year 2000 they will have an exponential tenfold increase to approximately 150 GW nuclear. At the present rate, the U.S. will do well to complete 120 GW by then.

In the United States, the most advanced method for assembly-line production of nuclear plants, the Westinghouse Offshore Power Systems floating nuclear plant facility in Jacksonville, Florida, has been scrapped. The U.S.S.R. is within months of completing the Atomash plant on the Volgodonsk River which initially will be able to mass-produce three of the 1,000 MW nuclear plants per year, reaching a final capacity of eight per year by about 1990, according to Davey's conservative calculations.

Simultaneously, the U.S.S.R. is proceeding aggressively on a liquid metal fast breeder reactor program similar to the stalled Clinch River program in the United States. The Soviets intend to thereby increase useable uranium by 20- to 60-fold. Since 1980, they have had a 600 MW prototype in Beloyarsk operating successfully. In addition, since Jimmy Carter's psychotic nuclear "nonproliferation" policy became law in 1978, the United States has refused to enrich uranium for other countries such as India, but the U.S.S.R. now enriches about 50 percent of all Western European uranium fuel, mainly French and German.