Energy Insider by William Engdahl

We'd better start breeding

Some little-known facts about the world's energy situation are revealed in a new EIR Special Report.

Despite the current wave of short-term bankruptcies plaguing the U.S. uranium mining industry (see *EIR*, June 2, 1981), the world actually faces a crisis in its supply of uranium to fuel nuclear power before the end of the 1990s. These are the conclusions of a new *EIR* Special Report titled "World Prospects for Nuclear Energy." In light of the continual footdragging by the administration on bringing the nuclear industry back from the edge of the abyss, it is worth reviewing some aspects of this report.

Most recent long-term global energy demand predictions have about as much scientific value as a Joe Granville stock market prediction: in the long term, they tend to be dangerous, if taken seriously. Nonetheless, some projection of future world population and economic growth to the end of the century must be at least a flexible tool of planning for expanded power needs.

The *EIR* study starts with this modest assumption, and estimates a series of scenarios of high-growth, modest-growth and low-growth requirements. For convenience, we use the same basis as the massive and little-discussed International Fuel Cycle Evaluation (INFCE) study. That report, made public in the final months of the Carter administration, and the most comprehensive forecasting attempt to date, involved the International Atomic Energy Agency and the Organization of Economic Cooperation and Development, and entailed geologic analysis of the uranium potential of 185 countries.

INFCE had some sobering conclusions that should give those in the administration who, like the overcomputerized Mr. Stockman, pursue the same Carter policy under the thin veil of "free enterprise." It estimates the availability of less than 1.850 million tons of what are termed Reasonably Assured Uranium Resources at an extraction cost of $30 per pound of uranium oxide, or lower. The current sale price in the U.S.A. is about $25 per pound.

Now, it is interesting to know that more than 84 percent of this most strategic mineral, which could fuel fully half of some industrial nations' power by the 1990s, is concentrated in only four places (data for the U.S.S.R. are unavailable): The United States is far and away the most important source with some 37 percent, followed by Africa (21 percent), Canada (19 percent), and Australia (7 percent). Europe has about 11 percent, with by far the majority being in the Swedish deposits of low-grade shale, putting it above the $30-per-pound range.

In the INFCE low-growth projection, we assume 850 gigawatts of nuclear power will exist in the non-communist countries by 2000. Today, we have 136 gigawatts in operation worldwide and 212 GW more under construction. A one-gigawatt nuclear plant the size of Diablo Canyon can provide electricity to a city of 1 million for about 30 years. The INFCE high-growth projection (which is hardly "high" in anything but current terms), projects 1,200 GW of nuclear capacity by 2000.

Now, assuming that there is no significant contribution from commercialized fast breeder reactors or fuel reprocessing—as is quite likely unless we change policy quickly—we will face a world uranium supply crisis under the most "benign" low-demand scenario by some time in the 1990s. If we begin to develop our nuclear base, the shortfall becomes evident by in the end of this decade!

Go back, then, to the present Volcker-induced bankruptcies of major portions of the U.S. domestic mining industry. With the world's largest economically recoverable uranium reserves, we have a strategic responsibility to the rest of mankind to take immediate steps to preserve and expand this mining industry. Given recent experience, it can commonly take a "lead time" of 10 to 15 years from the time of a new uranium field discovery to first commercial production, even with a reasonable Department of Interior and EPA administrator. This underscores the importance of every ounce of mining.

But more profoundly, since the world will grow in population and economic standards of living will rise, the *EIR* report underscores the stupidity of any further delay on all-out government support for reprocessing and breeders.

To order the EIR *Special Report. "World Prospects for Nuclear Energy," write Peter Ennis, EIR Box M, 304 West 58th St. New York, N.Y. 10019.*