Afterthoughts on Atomic Power

EVENTS ARE MOVING FAST on the atomic front. A few weeks ago General Electric announced (see page 152) that it would ask the Atomic Energy Commission for permission to generate byproduct power from the plutonium production at the Hanford plant of AEC. Next, AEC announced its award of a contract (same page) to Westinghouse to build a 60,000-kw atomic power plant—to be finished in about five years at a cost of "many tens of millions of dollars."

A few days later, by pure coincidence, more than a thousand American Industrialists—mostly nonengineers—patiently sat through two days of lectures on atomic power at a New York meeting of the National Industrial Conference Board.

What's the inner meaning of all this talk and action? Here, in brief, are my personal views.

First, it's safe to predict that several fair-sized atomic plants will be operating within six or seven years. I don't expect any of these will come within gunshot of competitive costs per kilowatthour—except by crediting power costs with plutonium sold to the Government at cold-war prices, for uses that are essentially military. By *military* I mean for bombs, artillery shells, warship propulsion and such uses.

If there were no cold war, and if nobody were worrying about A bombs and H bombs, I don't think atomic power would seem so urgent. Chances are we would be calmly discussing uranium as the "fuel of the future," to be developed gradually when our reserves of conventional fuels begin to run dry.

It must be granted that even the earlier atom-bomb plants may show a fuel-cost saving over coal, oil and gas. And "breeder" operation of the reactors will eventually make uranium fuel equivalent to coal at a few cents per ton. Yet I feel that the much higher first cost of the atomic power plants, and the complexities of fuel processing, will offset the lower fuel costs for many years. Again, this leaves out the plutonium subsidy, which may prove to be undependable in the long run.

If atomic plants are generating most of America's power a few decades from now, we shall be saving much of the money that would otherwise be spent for power-plant coal, oil and gas. This will be tremendously important for power and fuel men, but certainly not revolutionary from the national standpoint, since the total cost of all coal, oil and gas burned in central power plants is less than a half of one percent of the national income.

Despite soothing talk about "finding peaceful instead of military uses for the atom" I am convinced that the main moving force behind atomic power is military need. This becomes clear as we review some of the terribly important military and strategic facts: that Russia has the A bomb and probably the H bomb—that America must be top dog in atomic war potential so the fear of retaliation will hold off any enemy attack—that every atomic power plant will be a producer of byproduct plutonium—that the design, building and operation of atomic power plants will train many engineers in atomic techniques—that a "forced-draft" atomic-power program may lead to unpredictable atomic discoveries, and that these may become a matter of life and death to this nation—that a going atomic-power industry will help America keep foreign suppliers of uranium on our side.

To sum up, it is certain that atomic power plants will be built. I feel that they *should* be built—mainly for reasons of national security. To a large extent they will be built, equipped and operated by men who read POWER. That is the reason for this blunt summary of my personal *views regarding the future of atomic power.*—PHIL SWAIN