

LETTER FROM LONDON



Getting science to pay off

Britain's nuclear research is making money, and the model is being pushed

by F. C. Livingstone

The British Government is now envisaging the possibility of a new kind of national science research agency, whose customers, paying for the research programs they needed, would be Government departments, private and state industries and local authorities.

This next stage in the Government's policy for science was suggested by Anthony Wedgwood Benn, minister of technology, when he outlined the "frankly commercial approach" which the Government was adopting and the direction of its thinking.

"We have set as a major objective of our policy that science should be harnessed to the job of earning our living as a nation," Benn says. "We have therefore adopted a frankly commercial approach to our funding of science. It is absolutely no good spending hundreds of millions of dollars on self-generated science projects or those which earn Nobel Prizes and world acclaim if industrial competitiveness is neglected in the process."

As Benn explains, the Ministry of Technology was set up to concern itself with the uses to which science must be put to meet personal and national objectives. It should be judged by the objectives it has identified and by the extent to which they have since been realized.

At present, Britain spend over \$3 billion a year on research and development, of which the taxpayer provides over one-half. "Are we getting value for our money?" Benn asks.

The broad aims of the new commercially oriented research agency are something along the lines of the Atomic Energy Establishment at Harwell. This has set up design and construction companies, launched a fuel company, a ceramics center and a center for the study of friction, and has so successfully broadened its capacity that it is now considering further expansion, all for commercial purposes.

The aim is to apply a similar system to all research establishments under Government control and to the 45 industrial research associations which received state grants. Benn sees it as the obvious development of the contractual concept. An industry would suggest a research program and pay for the work to be carried out, thereby acquiring an added interest in applying the results more quickly.

(Meanwhile, SCIENCE NEWS Correspondent David Fishlock reports from London, Britain's Atomic Energy Authority is moving into the lucrative

American market for atomic fuel.)

Britain has broken into the fiercely competitive market for atomic fuel for reactors of American design. The Production Group of the British Atomic Energy Authority has secured a Dutch contract to refuel the 51.4-megawatt Dodewaard boiling water reactor during the three years 1970-73.

Atomic fuel, unlike other fuels, is a precision engineering component, produced to exacting physical, chemical and mechanical tolerances. Typically, it accounts for a third of the initial cost of a reactor. The Dodewaard contract will be the first time Britain has supplied fuel for a reactor of U.S. design, and enhances her prospects of penetrating the U.S. market for atomic fuel.

This market will grow rapidly during the 1970's, as the big water reactors—starting with Oyster Creek in New Jersey and Nine Mile Point in New York—come on-line. Atomic Energy Commission estimates put the U.S. market for fresh fuel by 1980 at \$600 million a year. Over 73,000 megawatts of light-water atomic capacity are in operation, under construction or planned in the U.S.

Britain is prohibited by the terms of the Anglo-U.S. bilateral agreement from selling atomic fuel directly in the U.S. But Gulf-General Atomic of San Diego announced recently that it plans to collaborate with the Production Group of the AEA in a scheme that could give Britain an entrée to this big nuclear market. The Production Group, with plants at Springfields, Windscale and Capenhurst in England, operates the world's largest integrated atomic fuel operation.

Gulf-GA, a major uranium processor is keen to break into a market for which a dozen U.S. companies are already competing. But its collaboration with a large U.S. fuel fabricator could stimulate antitrust action.

Outside the U.S., the size and experience of the British operation outweighs the fact that the country is committed to gas-cooled instead of water reactors. Especially valuable, thinks Gulf-GA, is the wide AEA experience in fuel management—the way fuel is distributed and shuffled within the core to secure its most economical use.

Given evidence that it can secure a substantial slice of the U.S. fuel market, Gulf-GA plans a jointly owned fuel company in San Diego, in which Britain would have a minority holding. It could be in business as early as 1972, predicts Donald Hunter, Gulf's nuclear fuels marketing manager.