

the number of nearest neighbour phosphorus atoms.

The week's discussion showed that many of the problems in this field require a detailed knowledge, not only of the physics of the system, but also of the chemistry of the molecules under investigation. The need to cross fertilize between the two disciplines was reflected in the composition of the conference, which was attended by roughly equal numbers of physicists and chemists.

## Select Committee

THE Select Committee of the House of Commons on Science and Technology continued to hear evidence from Sir William Penney, Chairman of the U.K. Atomic Energy Authority, when it resumed discussion of the British reactor programme on March 9. The costs of the OECD high temperature reactor (*Dragon*) were carried largely by the United Kingdom and Euratom, Sir William said. Each paid about 45 per cent, and another £4.5 million would be needed to carry the project on until 1970; the total cost would then be £31 million. Britain was prepared to go on, but because of political difficulties Euratom was unable to make up its mind. If Euratom refused, he said, the project might well come to an end; it would certainly be expensive to continue without Euratom, and the possibility had not yet been given serious thought.

Sir William said that Britain was not developing a small reactor, although the authority was keeping an eye on developments elsewhere. There seemed no point, he said, since nuclear propelled ships had so far shown no chance of being more economical than conventional ones, and there was no other obvious use for small reactors. For fast reactors, the authority had calculated capital costs of £50 per kW installed, and running costs of 0.3d. per kWh. So far as he was aware, no other source of power could compete with this—natural gas might be able to, but he had seen no figures. Mr. Eric Lubbock said that in the United States figures of \$100 per kW installed were already being quoted, but Sir William replied that comparisons were hard to make, and that running costs were just as important as capital costs.

Diversification was an essential part of the authority's programme, Sir William said. Despite this, and the fact that the total staff of the authority had been allowed to decline from 40,000 in 1962 to 32,000 in 1966, there were still too many people on the payroll. Reduction of staff would be largely by wastage, and 20 per cent of the staff would move to non-nuclear work in the next five years. The chief item in the diversification programme was desalination, but the best market for this, Sir William said, might turn out to be with a conventional power source rather than with nuclear power. Under the Ministry of Technology umbrella there was an enormous amount of materials research—at Harwell, Farnborough, and the National Physical Laboratory. If this could be integrated—although not geographically concentrated—considerable improvements ought to be possible. Asked how easy it is for people to leave the authority, Sir William said that pension rules were liberally interpreted, but it was hopeless expecting men from Harwell to go into schoolteaching—there simply was not enough money in it.

## Parliament in Britain

IN a written answer in the House of Commons on March 6, Mr. Roberts stated that Science Research Council awards are provided for research training or an approved course of postgraduate instruction but not primarily for obtaining a higher degree. In 1962–63 there were 1,623 qualified applications and 1,610 awards were made: for 1963–64 the corresponding figures were 1,968 and 1,932; for 1964–65, 2,567 and 2,507; for 1965–66, 2,928 and 2,785; and for 1966–67, 3,096 and 2,775. Mr. Roberts declined to consider lowering the standard of qualification for awards and added that in 1966 the number of research and advanced studentships awarded by the Science Research Council was about 18 per cent of the number of students graduating in that year and provided support for about half the total number of graduate students in science and technology. In 1962–63 the Science Research Council awarded 48 fellowships tenable in the United Kingdom; 28 NATO and Council fellowships tenable abroad; and 16 fellowships to British scientists in North America to enable them to return to the United Kingdom. For 1963–64, the corresponding figures are 44, 18 and 20; for 1964–65, 52, 27 and 32; for 1965–66, 83, 25, 41; and for 1966–67, 54, 26 and 41. A proposal by the Science Research Council to increase the value of fellowship awards is being considered in relation to relevant aspects of incomes policy.

REPLYING for the Government in a debate in the House of Lords on Overseas Information Services on March 8, the Minister of State for Foreign Affairs, Lord Chalfont, admitted the need for careful examination and planning of such services and also that the development of modern communication systems had made such effort more important. He saw no reason for any further co-ordinating process than that which normally took place through the Cabinet and its committees: each Minister was responsible for co-ordinating the information activities of his department. Lord Chalfont maintained that reductions so far made and planned in United Kingdom based staff were fully in accordance with the recommendations of the Plowden Committee. He also mentioned that special campaigns had been instituted on such subjects as Britain's achievements in desalination and in the development of nuclear energy. Sir Thomas Rapp's report reviewing the work of the B.B.C. External Services had been received in August 1965 with important recommendations for capital expenditure to improve the audibility of B.B.C. programmes, and the government had now asked Sir Harold Beeley to review the overseas information services with a view to reconciling their effectiveness with the containment of public expenditure.

IN a written answer in the House of Commons on March 7, the Joint Parliamentary Secretary, Ministry of Technology, Dr. J. Bray, stated that booklets describing methods of determining eight toxic substances in factory atmospheres, based on research carried out in the Laboratory of the Government Chemist for the Ministry of Labour, were published by H.M.S.O. in 1966. Booklets on chromic acid mist, phosgene, nitrous fumes and mercury were in the press and methods for hydrogen fluoride, ozone and organic di-isocyanates are being investigated.