# NEWS AND VIEWS

## Another Contender

THOSE cynical about the economic case for nuclear power may permit themselves a hollow laugh over discussions held in Brussels at the end of May. The OECD held a three day assessment meeting on two high temperature reactor projects—the Dragon reactor at Winfrith in Dorset, and the thorium high temperature reactor at Julich in West Germany. In time honoured style, the optimists at the meeting predicted tender prices of the order of $140 to $150 per KW, and fuel cycle costs as low as 1·1 mills/KWh in a gas cooled system using slightly enriched uranium. This fuel cycle has only recently been studied, so it may be a long while before these figures are quoted seriously by a manufacturer looking for work.

The Dragon experiment went critical in August 1964, and has been at full power (20 thermal MW) for just over a year. The other reactor, called the AVR after the group of German utilities—the Arbeitsgemeinschaft Versuchkraftwerke—which supports it, went critical in August 1966. It will be brought up to its full power of 15 electrical MW in August of this year. In addition to the experimental work, design studies for very large high temperature reactors, of more than 1,000 thermal MW, have been going on for some time. The discussion at the Brussels meeting, however, was based on detailed studies for smaller designs than this, a 530 MWe Dragon type station, or a 300 MWe THTR unit, both of which could equally be built in double sizes. Principal difference between the types is that the fuel elements for Dragon are cylindrical and 50 cm long, while those for the THTR are in the form of 6 cm diameter spheres. In both cases the actual fuel would be in the form of particles 0·5 mm in diameter coated with layers of carbon. At least part of the optimism was inspired by the thought of coupling the coolant gas—helium—to a closed cycle gas turbine. Overall efficiencies, it was thought, could then exceed 50 per cent, compared with 40–45 per cent in other systems, and it would no longer be necessary to build the power station near a river or coastal site. A West German firm, Gutehoffnungshütte Sterkrade AG, is shortly to begin building a prototype gas turbine plant.

What the meeting did not clear up was the future of the Dragon project, which still awaits approval from the Euratom countries for the next phase of operations. The need for a decision is becoming increasingly pressing.

## Programmed Training

COMPUTER men have for a long time seemed rather a disorganized part of the scientific and industrial establishment. The British Computer Society hopes to end this unsatisfactory situation by putting the training and qualifications of computer personnel on a proper footing. It intends to introduce professional qualifications and a system of training for examinations which will enable programmers and systems analysts to put letters after their names.

The proposals of the computer society originated in the discussion of a working party set up last year under the chairmanship of Dr Oliver Thompson. The committee has proposed a four tier arrangement, incorporating four grades of membership—students, associate members, members and fellows, in order of ascending eminence. Student members must be between the ages of 17 and 25, and on approved training courses in industry or in colleges. The courses will qualify the students for Part I of the society's examinations, which will consist of one general paper and a further four papers covering two optional subjects. If the students pass, are more than 21, and are sponsored by two members of the society, they will be able to apply for the associate grade. This will not entitle the candidate to letters after his name.

To become MBCS—member of the British Computer Society—the associate has to go on to more difficult exams, in Part II. If the candidate passes, is more than 25, with 5 years practical experience and a responsible job, he can become a member of the society. For a full fellowship (FBCS) he must be more than 30 with at least 8 years experience, and have spent 5 years in a responsible position. Two full fellows must be prepared to sponsor his application. The whole system should come into effect in September 1968, and existing student members will have to resign themselves to taking the exams unless they are 21 before May 1, 1968. Existing associate or ordinary members will be exempt from the exams if they have 7 years experience. If not, they will be fitted into another grade, the subscriber grade, until the 7 years is up, when they will become full members without examination.

The society explained that the creation of professional grades is intended primarily to give a lead in training. At the moment a large number of courses are offered, but there are gaps in training and some examples of duplication. The qualifications will help employers by establishing standards, and will offer the qualified man some concrete evidence of his ability. In addition, it is hoped to establish professional standards of ethics and behaviour—a sort of computer man's Hippocratic Oath. This is particularly important, as highly secret information about individuals or companies is often handled by computer. One effect may be to reassure companies about the security status of computer bureaux, so that the time taken up by training and exams may perhaps be offset by increased business.

## Merging Research

THE enthusiasm of the Ministry of Technology for industrial mergers has taken root much nearer home. If plans are approved, two research associations—the Printing, Packaging and Allied Trades Research Association and the British Paper and Board Industry Research Association—will merge into one association on June 29. The reason for the merger is rationalization, and the new association hopes to cover the whole range of production right from tree pulp to attractive packages on the supermarket shelf. A secondary reason is that the lease on the Kenley laboratories of the BP and BIRA will run out in a few years, and the