GENERATORS

Some Light in the Gloom

THE Central Electricity Generating Board can take a crumb of comfort from the fact that the troubles with its 500 MW generating sets, which last December caused power reductions of about 6 per cent, are being resolved. And prospects for the smooth installation and commissioning of some of the 660 MW sets in the next few years are good. But by no means is everything in the garden now rosy. Other breakdowns and troubles last winter pushed the proportion of plant which was out of operation at critical times to over 20 per cent (*Nature*, **228**, 1125; 1970) and the shortage of smokeless fuel will not make things any easier for the rest of this winter.

The whole matter of the 500 MW sets was reviewed by the Select Committee on Science and Technology earlier this year (HMSO; 4*s*) and the conclusions were that the design work was insufficiently detailed, that there were welding defects and hairline cracks in the boilers and that some malicious damage had been done.

There are now twenty-three 500 MW sets at various stages of commission and some are producing over 95 per cent of their maximum power—the outputs vary from about 280 MW to 480 MW. Three of the four sets at Eggborough, Yorkshire, which contributed much to the trouble last winter have now been modified and are generating between 380 and 430 MW each; the fourth is being reconstructed. There has been no recurrence of the damage at Aberthaw B power station which was considered malicious by the Select Committee because a number of bolts were found inside the generators.

Manufacturers seem to be taking to heart the remarks about design contained in the Select Committee Report and the CEGB is confident that the 660 MW sets to be incorporated into the Hinckley Point B, Hartlepool and Dungeness B nuclear power stations will not show the type of fault which beleaguered the 500 MW sets. The board points out, however, that final tests can never be carried out until the sets are in position.

VENUS-7

Mystery and Speculation

from our Soviet Correspondent

THE degree of success of the Soviet Venus-7 probe would seem to have added a further, if minor, mystery to that already mysterious planet. There has been considerable speculation about whether the probe was intended to reach the surface of the planet in a viable condition and, if so, whether it succeeded. The relatively minor announcement for Venus-7 in *Pravda* (December 16, 1970)—a small article half-way down the front page, with no supporting articles in the inside pages—suggests, perhaps, that Venus-7 cannot yet be described as a major Soviet success in space research. The facts of the probe's mission, however, seem to be as follows.

Venus-7, launched on August 17, 1970, completed its 320 million km journey in 120 days, during which it had broadcast to Earth 124 sessions of telemetered information. Preparations for the descent began on December 12 at a distance of 1,300,000 km from the planet. At this point, the batteries for the descent stage were switched into a charging circuit from the solar cells. At the same time, cooling of the descent stage to a temperature of $-8°$ C began.

Immediately before entry into the Venusian atmosphere, the descent craft was separated from what is described as the "orbital section". The descent craft entered the atmosphere at 10·3 km/sec and this velocity was reduced by aerodynamical braking to 250 m/sec when the parachute system came into operation. The antennae were deployed and radio transmission of information began.

The transmission continued for 35 minutes. Until some preliminary results are released, whether the descent stage actually reached the surface of the planet, or whether it, or its transmitting system, was destroyed by heat while still parachute-borne is open to speculation. It is perhaps significant that, in the preliminary news releases from the TASS agency, the concluding stage of the experiment is described as "entry into the atmosphere", and no mention is made of any possible contacting of the surface.

CANCER THERAPY

Insufficient Evidence

THE publication last week by Dr Joseph Issels of a preliminary report of his unconventional method for treating cancer has done little to remove the controversy surrounding his techniques. The Medical Research Council's Joint Coordinating Committee on Cancer Research was quick to publish a statement pointing out that the evidence so far available is "insufficient to enable a scientific assessment to be made of Dr Issels's methods of treatment or of his results", and the committee added that such evidence as there is does not encourage the belief that any advance in the treatment of cancer has been achieved. The committee, nevertheless, intends to send a few experts to have a look at Dr Issels's clinic at Ringberg to see whether further study of his methods is necessary.

In several respects, Dr Issels's report of his work, published in the latest issue of *Clinical Trials Journal*, leaves unsaid more than it reveals. To be fair, Dr Issels himself claims that his results are not conclusive, and that a more detailed statistical investigation of the results of his technique should be made. He describes in his article a study of a sample of 242 from a total of 750 patients who attended his clinic. It turns out that 42 from the sample were alive and "fully fit for work" five years after treatment, and, of these 42, 39 still showed no signs of cancer 15 years after treatment. A preliminary study of a further 370 patients who were treated by Dr Issels shortly after surgery or irradiation shows that 87 per cent were still alive after a period of five years, with no detectable relapse. Dr Issels therefore claims that his treatment reduces the danger of relapse during the first five years to 13 per cent, compared with the world average of 50 per cent.

Whether or not these claims are justified depends to a great extent on the criteria by which Dr Issels selects his patients, and his report does not shed much light on this factor. The report also gives a very sketchy account of his method of treatment, and does not include analysis of control trials. Indeed, Dr Issels has consistently refused, on ethical grounds, to carry out control trials, without which an accurate assessment