

NEW WORLD

Energy Research Expands Rapidly

by our Washington Correspondent

THE first instalment of a massive research and development programme, aimed at opening up new sources of energy within the United States, was unveiled last week. Administration officials outlined plans to spend more than \$1,000 million on energy research and development this financial year—about \$115 million more than had originally been set aside for such activities. Moreover, as President Nixon announced in June and reiterated last week, the extra helping is simply a prelude to a programme which will soak up more than \$10,000 million by 1980.

At the end of June, Nixon promised, as part of his second message on the energy crisis (see *Nature*, 244, 4; 1973), to step up spending on energy research and development. He then dumped into the lap of Dr Dixie Lee Ray, Chairman of the Atomic Energy Commission, the problem of how an extra \$100 million can best be spent on such activities this year. Ray produced her report in a little over two months, it was reviewed by the Office of Management and Budget and the White House's Office of Energy Policy, and it was the fruit of those endeavours that was unveiled last week.

Coal research is the chief beneficiary of the largesse, for it is set for an increase of some \$50 million above the president's budget request. Projects aimed at liquefying coal will get \$30.4 million this year—nearly three times more than last year—and research into coal gasification is set for \$63 million, up from \$33.4 million last year.

Also earmarked to share in the bonanza is research and development on geothermal energy resources, fusion and solar energy.

Among other areas scheduled for large increases above the original 1974 budget request are the following:

- The development of technologies to remove sulphur oxides from fuels and stack gases, which will allow the use of high sulphur oil and coal without harming the environment; this is earmarked for an increase of \$12 million over the budget request.

- Energy conservation, which is set for a \$6 million increase, particularly for programmes expected to produce results in the relatively near future.

- Research and development on gas cooled nuclear reactors, with the bulk of the increase going to research on thorium as a nuclear fuel, and on

reactor safety; \$7 million has been added to the budget for those activities.

- The development of new automobile engines which will be more efficient in their use of fuel; such programmes get an extra \$6 million.

As usual in such matters, however, the figures put out by the Administration last week are a little misleading, and seen in relation to Congressional activities, they are not as generous as they seem.

First, the Administration claims to have added \$115 million to the \$887 million it had requested in its original 1974 budget estimates, but a look back at the figures in that budget shows that the Administration was requesting only \$772 million. The difference is explained by the fact that the definition of 'energy research and development' has been broadened to include such items as energy conservation, environmental effects and automotive research. The inclusion of such items brings the total expanded programme to the politically appealing figure of \$1,000 million.

Second, Congress has already passed, or is about to wrap up, appropriations bills which have added between \$80 and \$90 million to the Administration's original budget request. Thus the plan unveiled last week is only some \$20–\$30 million greater than Congress has already approved.

One aspect which is causing some concern, however, is where the money will come from. As President Nixon is repeatedly telling the world, he has no intention of raising taxes, and has a firm commitment to hold federal spending to \$269,000 million this year. The question, therefore, is will the extra money for energy research come from somebody else's budget—biomedical research, for example? At a press briefing in the White House last week, Dr H. Guyford Stever, Director of the National Science Foundation and the President's science adviser, Dr Ray and other Administration officials indicated that the money would simply be added on to the total budget, but there is still considerable confusion about the matter.

MEDALS OF SCIENCE

Nixon Speaks

by our Washington Correspondent

IT is not often that President Nixon talks in public about science, but when he does, his words are carefully watched for any indications of the way the budgetary winds are blowing. Last week, Nixon made many interesting remarks about science, but unfortunately they received little notice because they clashed with a rather more newsworthy event—Mr Agnew's resignation. The occasion was a White House ceremony during which eleven scientists received the National Medal of Science.

He tackled an area in which his Administration has been heavily criticised by the scientific community—the inadequacy of the science budget:

"Well, the budget is a problem in many areas. I can only say, however, that in the field of basic research, when it comes to problems of energy, when it comes to problems of the environment, we must allocate a larger proportion of our national income to those areas. . . ."

"What I am saying is simply this: We all know that because the United States needed a concentration on defense at a critical time, and then later a concentration on space, that this opened up broad

new vistas in the areas of science, and this also resulted in a much greater federal contribution and the justification for it from a budgetary standpoint. But now as we turn from war to the works of peace, we must not cut back on that research.

"What we must do is channel the efforts in the field of research to peaceful uses, the field of energy [and] ecology . . . and not, of course, by mentioning these two to in any way downgrade the efforts we should make in the fields of health, education and others. . . ."

As for the Medals of Science, they were not awarded in 1971 or in 1972, and no explanation has been offered by the Administration for the lapse. This year's winners are Dr Daniel I. Arnon, University of California, Berkeley; Dr Carl Djerassi, Stanford; Dr Harold Edgerton, MIT; Dr William Maurice Ewing, University of Texas; Dr Arie Jan Haagen-Smit, California Institute of Technology; Dr Valdimir Haensel, Universal Oil Products Inc.; Dr Frederick Seitz, Rockefeller University; Dr Earl W. Sutherland Jun, Miami University; Dr John Wilder Tukey, Princeton; Dr Richard T. Whitcomb, NASA; and Dr Robert Rathbun Wilson, National Accelerator Laboratory.