Carter's science team Yesterday's men

Washington

As the Reagan Administration continues to have difficulty in filling many of its top jobs — posts which remain vacant include the directorship of the Office of Science and Technology Policy (OSTP), the chairmanship of the Nuclear Regulatory Commission, and the directorship of the Office of Energy Research — science policy officials from the Carter Administration are having mixed success in finding new positions. Most have slipped back into academic posts — the traditional fall-back for Democrats, in contrast with Republicans, who usually return to the private sector after leaving office. But for some, the prospects are still uncertain.

Most successful in finding a new job has been Dr Frank Press, Mr Carter's science adviser and director of OSTP, who was recently elected to succeed Dr Philip Handler as president of the National Academy of Sciences. Dr Press takes up his new position in Washington at the beginning of July, and has meanwhile returned temporarily to his old post as professor of geology at the Massachusetts Institute of Technology.

Of Dr Press's three original associate directors at OSTP, Dr Gilbert Omenn, responsible for health sciences, has returned to the University of Washington in Seattle, where he is professor of medical genetics, having spent the last year of the Carter Administration as associate director of the Office of Management and Budget. Dr Philip Smith, associate director for natural resources, has temporarily joined the staff of the National Science Board, the overseeing body of the National Science Foundation. The third, Dr Benjamin Hubermann, remains at OSTP keeping the director's seat warm until a successor to Dr Press is appointed.

Dr Robert Frosch, administrator of the National Aeronautics and Space Administration (NASA) under Mr Carter, is already established as president of the newly formed American Association of Engineering Societies. Dr Hans Mark, previously secretary of the Air Force and before that director of NASA's Ames Research Laboratory, was at one point tipped to succeed Dr Frosch, but has now been nominated as deputy to NASA's new administrator, Dr James Beggs.

Another academic who has returned to her former base is Dr Eula Bingham, previously Assistant Secretary of Labor responsible for the Occupational Safety and Health Administration (OSHA). Dr Bingham has rejoined the University of Cincinnati, from which she had been on leave as professor of environmental health.

In contrast, Dr Bingham's counterpart at the Environmental Protection Agency, ex-administrator Mr Doug Costle, is entering the academic world for the first time. Before his appointment under Mr Carter, Mr Costle

had been an assistant director of the Congressional Budget Office, and commissioner of environmental protection in the state of Connecticut. A lawyer by profession, he was recently named as a visiting scholar at Harvard University's School of Public Health, and a lecturer at the John F. Kennedy School of Government.

Moving in a different direction is Dr Edward Frieman, brought in to succeed Dr John Deutch as head of the Office of Energy Research. Before coming to Washington, Dr Frieman was deputy director of the Plasma Physics Laboratory at Princeton. He has now joined a Washington-based consulting firm, Science Applications Incorporated, which deals in a range of energy issues.

Two appointments have remained unchanged. Dr Donald Fredrickson, originally appointed by President Ford as director of the National Institutes of Health for a six-year term, has stayed in that position. Also staying put is Dr John Slaughter, brought in during the last months of the Carter Administration as director of the National Science Foundation partly on the understanding that Mr Reagan would not send him straight back to Washington State University, where he had only recently been appointed provost.

Less fortunate has been Dr Anthony Robbins, previously director of the National Institute for Occupational Safety and Health (NIOSH). Dr Robbins became the target of a bitter attack by conservative groups for his support of labour union positions on some occupational health issues, and was summarily removed from his post by the new Health Secretary Mr Richard Schweiker, as well as being stripped of a commission in the US Health Corps.

At the State Department, Thomas Pickering, previously head of the Bureau of Oceans and International Environmental and Scientific Affairs, has returned to his position as a career foreign service official. And William J. Perry, previously Under-Secretary for Defense for Research and Engineering, has joined a San Francisco investment banking firm.

David Dickson

Ariane development Launch at last?

The European Space Agency (ESA) has announced that the third test launch of the Ariane launcher, with two satellites on board, is to take place on 19 June. After extensive testing and some modifications, the problems associated with the first-stage engines have apparently been solved.

Europe's three-stage launcher programme encountered a major setback during the second Ariane test launch on 23 May 1980. Subsequent analysis revealed that instabilities in the injection system caused pressure oscillations at 2,300 Hz to develop inside the combustion chamber of one of the four first-stage Viking engines. The oscillations caused structural damage which in turn hindered cooling and resulted

Up, up, but . . . away?

in rupture of the engine. Subsequent ground tests also revealed oscillations at 2,700 Hz.

Liquid-fuelled rocket motors are notorious for such instabilities, which still confound theorists. ESA's trial and error approach to the problem has involved months of testing of alternative modifications to the injector system. One design, in which the injection nozzle diameters have been slightly widened, resulted in a complete absence of pressure oscillations during ground tests, and has now been adopted. As a further safety measure, manufacturing tolerances have been tightened.

Like its predecessors, the third Ariane is to be launched from Kourou in French Guyana. It will carry Meteosat 2, a European meteorological satellite, and APPLE, an Indian telecommunications satellite. If all goes well, the fourth and final test launch will take place in October.

Ariane's problems have hindered its progress as competitor to the United States shuttle. However, contractors such as Intelsat — the international telecommunications satellite organization — have not cancelled their options on Ariane as a result of the delays.

Philip Campbell

British aerospace Limbering up

Further evidence of the UK government's sudden eagerness to enter the space race came last week in the form of a new committee set up as a forum for the views of the space industry, users and government. This Space Consultative Committee has held its first meeting to try to determine its role.

The diverse membership of the committee, which includes representatives of government departments, the Science

Research Council, the broadcasting authorities, British Telecom and satellite and telecommunications equipment manufacturers, suggests that it is intended to coordinate views from a variety of sources, a role that in other countries might be taken by a national space agency.

Mr Keith Marshall, Under-Secretary of State in the Department of Industry, who will chair the committee, said in parliament that it would also be investigating topics such as the future programmes of the European Space Agency in telecommunications and remote sensing satellites, a satellite communications system for the Ministry of Defence and the marketing strategy of British satellite and ground-station technology abroad. He also indicated that the government would expect industry to put up all the finance for promising projects.

The committee will shortly have before it the conclusions of two reports commissioned by the government. The report of the Home Office study on direct broadcasting should be published later this month and the conclusions of the report of the Central Policy Review Staff on Britain's future in space are to be made available to the committee.

Hopes that an abbreviated version of the review body's report would be published, however, were quashed at the end of last month by a statement in the House of Commons — the government apparently fears breaching industrial confidentiality by allowing open discussion of the report. So far the only conclusions to emerge have been rather bland, such as that the United Kingdom should continue its commitment to the European Space Agency. It is to be hoped that the committee will provide a focus for wider debate. **Judy Redfearn**

European Parliament Nuclear ban debate

Brussels

A moratorium on nuclear power in Europe will be the subject of a debate in the European Parliament this week. Also on the agenda is a motion on the Geneva Appeal which was launched as a protest against France's fast breeder reactor, Super-Phénix.

The moratorium debate will focus on a report by Sir Peter Vanneck (European Democrat) who is strongly opposed to the idea. The report was adopted by the energy committee by 13 votes to 7 following a resolution by three independent Members of the European Parliament in December 1979. The moratorium would be used as an opportunity to look into the problem of storing nuclear waste, harmonizing safety standards and promoting widespread public discussion. In his report, Vanneck concedes the benefit of these points but feels that the cure would be more painful than the disease.

Depending on how widespread the moratorium would be, Vanneck calculates that by 1990 it would leave the Community short of between 45 and 115 GW, equivalent to 76 or 170 million tonnes of oil a year. By 1990, 34 per cent of the EEC's electricity needs will be supplied by nuclear power. Vanneck also points out that in 1975 electricity from nuclear power caused no deaths in the United Kingdom, while maritime transport (of oil and coal) caused 86 deaths per 100,000 employees and coal mining caused 23.4 deaths per 100,000.

The underlying cause of public concern, says Vanneck, is that plutonium produced in nuclear power stations may be used for

military needs. This issue will certainly be linked with the debate on the Geneva Appeal. In October 1978, more than 30,000 French and Swiss, including a number of leading figures, signed an appeal asking the political community in Europe at large to consider alternatives to fast breeder reactors. The appeal reflects the fears of both Swiss and French living in the neighbourhood of the 1,250 MW Super-Phénix fast breeder reactor under construction at Greys Malville in France.

The Council of Europe had held public hearings on breeder reactors in 1979. The present motion, if adopted, would call on all governments concerned to suspend work connected with breeder reactor projects. The EEC itself does not directly contribute to any fast breeder construction programme. The European Commission, however, is preparing a report on the state of the nuclear fuel reprocessing industry.

Both debates, are nevertheless rearguard actions of the anti-nuclear group in the parliament. Most parliamentarians, as previous resolutions have shown, are firmly in the nuclear camp. But the anti-nuclear minority represents nearly a fifth of the members, who are effective in keeping up pressure on the Commission and member states.

Jasper Becker

British countryside Ever onward

The British government's Wildlife and Countryside Bill — regarded as the last opportunity for major legislation on nature conservation matters this century — is likely to generate as much controversy during its passage through the House of Commons as it did in the House of Lords earlier this year. The Lords considered a record 560 amendments to the bill and defeated the government on seven of them. Many of the arguments thrashed out then, on numerous topics relating to nature conservation, will be raised again, with the government trying to reverse some of the Lords amendments and various lobbyists trying to introduce more.

During the bill's second reading in the Commons last week, Mr Michael Heseltine, Secretary of State for the Environment, said that the government was still convinced that conservation would not be well served by compulsion. This is the chief bone of contention over clauses in the bill relating to the protection of sites of special scientific interest (SSSIs). In the Lords, the conservation lobby attempted — unsuccessfully — to amend clauses giving statutory protection to a few specially selected SSSIs to cover all such sites. The debate is likely to continue in the House of Commons committee appointed to debate the bill in detail.

The committee, which began sitting on 5 May, has 20 members, including Keith Hampson and Hector Munro for the

East Germany banks on research

High technology will be the keynote of East Germany's economic strategy for the 1980s, First Secretary Erich Honecker told last month's Congress of the Socialist Unity Party. An intensive drive to modernize and automate industry, he said, should save the country some 2,800 million man-hours during the next five years, primarily through the application of microelectronics and an increase in the number of industrial robots to be introduced into industry during the period from an original estimate of 9,000 to some 40,000.

By 1985, the country should be virtually self-sufficient in the production of microprocessors and their components. Other priority areas will include fibre optics, laser technology, industrial applications of microbiology, hydrogen and biomass energy sources and the development of new sophisticated technologies to make the maximum use of raw materials at the minimum cost in energy. (The recent shortfall and

future uncertainty of coal supplies from Poland have caused planners to pay renewed attention to the country's own lower-grade fossil fuels, mainly lignite).

Although Mr Honecker's review of the work of research establishments, from the Academy of Sciences downwards, stressed the technological and applied aspects, he did pledge the party to a systematic development of basic research "as the source of new discoveries on logical relations in nature and society". The universities, including their extension and evening courses for full-time workers, came in for special commendation as did the preliminary training courses for students at their future work-places.

The situation in the lower educational echelons, however, seems less satisfactory. Too few young people seem to be interested in scientific and technical subjects, and Honecker urged teachers and the media to make science and technology more attractive. **Vera Rich**