

Congress faces decision on CFC

New ozone data from NASA

Washington

When Congress reconvenes next week one of the many contentious issues it will face is the future of US controls on the production and use of chlorofluorocarbons (CFCs). The debate has been given a new twist by two factors: data that seem to provide the first empirical evidence of depletion of the Earth's ozone layer, which might be attributed to CFCs; and an intensified campaign by both manufacturers and industrial users to head off any further regulation.

Having banned the use of CFCs in most aerosol sprays four years ago, the US Environmental Protection Agency (EPA) announced last October that it intended to broaden its restrictions to cover non-aerosol uses such as refrigerants, foaming agents and solvents. The move came after two reports from the National Academy of Sciences appeared to confirm earlier warnings that depletion of the ozone layer by CFCs could cause problems ranging from an increase in human skin cancer due to the extra ultraviolet radiation that the Earth's atmosphere would let through, to unpredictable effects on agricultural yields as a result of climatic changes.

Although EPA still has an official deadline of December 1981 for implementing the new restrictions, which in their present form would ultimately limit production of CFCs in the United States to 30 per cent of the present levels, such moves seem to be in abeyance as part of the Reagan Administration's general effort to reduce the burden of environmental regulation on the private sector.

But the CFC producers want more. At their instigation, draft bills have been introduced into both the Senate and the House of Representatives which would restrain EPA from imposing further controls on the production and use of CFCs until there was "clear scientific evidence" that they pose a threat to humans and the environment.

Until recently, manufacturers had made considerable play on the fact that the predicted effect of CFCs on the ozone layer — which a National Academy of Sciences report two years ago said would be depleted by about 16 per cent if present trends were to continue — have been based primarily on scientific models with little empirical verification. They criticized EPA for creating the impression that the CFC ozone theory is "fact" rather than a "theory" whose calculations "are very much in question". The situation is now changing

following evidence produced by scientists with the National Aeronautics and Space Administration (NASA) of what appears to be a steady depletion of the ozone layer 40 kilometres above the surface of the Earth at a rate compatible with some of the theoretical predictions.

The NASA data are based on readings made from two experimental meteorological satellites — Nimbus Four and Nimbus Seven. Both use a "total ozone mapping spectrometer" which can detect the ozone concentration at different heights above the Earth's surface.

According to Dr Donald Heath, a staff scientist with NASA who has been responsible for designing the ozone experiments, analysis of the measurements over the period 1970–79, once seasonal variations and other factors have been eliminated,

reveal two principal components. The first can be related directly to the 11-year solar cycle; but in addition to this, says Dr Heath, there appears to be a steady decrease of about 0.5 per cent a year at a height of 40 kilometres.

Although Dr Heath says that CFCs "represent the most likely explanation", he admits that other hypotheses could explain his data, such as the effect of different components of the solar spectrum: "the important thing is that apparently the effect [on ozone depletion] predicted by the theory is being confirmed, and a change in the ozone concentration does seem to be taking place".

Industry representatives remain sceptical, pointing out that the NASA data have not yet been subject to peer review or published. They emphasize possible weak-

Britain losing out on information technology

The private telecommunications industry in the United Kingdom appears to be making another strong play for a slice of the British telecommunications cake — this time in the strange guise of a report prepared for the National Enterprise Board (NEB), made public last week.

The report was written by staff of the telecom and computer division of the management and technical consultants PA International, and it warns that the deficit in the British balance of payments in the telecom industry will rise to £1,000 million a year in 1990 — unless the government takes a number of major initiatives.

In prime place among them is the proposal that the Department of Industry should "clarify and implement the liberalization of British telecommunications promptly". This means to make prompt use of the act which recently established the company British Telecom (the Post Office telecommunications division under a new guise). The act withdraws the previous Post Office monopoly in telecommunications — but vests discretion granting project licences in the Secretary of State for Industry, free marketeer Sir Keith Joseph. Private industry, backed by the PA report, wants licences now, and is also concerned that under the present act liberalization of the market could be reversed by a Secretary of State who opposed Sir Keith's views (as would probably follow, for example, if a Labour government were installed at the next general election, due by 1984).

Besides liberalization, the NEB-commissioned report calls for British Telecom to be allowed to raise capital on the private market; for government departments which are major spenders or potential major spenders in the information industry to coordinate procurement policies, with a view to stimulating the proper growth and international orientation of the industry; for the

Department of Industry and Ministry of Defence to help UK companies win international bids by financial backing and guarantees for risk-sharing consortia; and for government departments to stimulate technology transfer from the government sector to the commercial sector.

PA recognizes that such wide-sweeping proposals may fall on deaf ears, but hopes they may stimulate some thinking. The trouble is that the proposals smack of a central technology policy, and Britain has no appropriate minister to champion or implement it. The Prime Minister is also on record as saying that she sees no need for such centralization (*Nature* 281,249; 1979).

A different obstacle — government opposition to new spending — may also apply to another group of proposals in the PA report, which advocates a number of special government-led projects in telecommunications. One would be a large-scale demonstration "electronic office"; another an electronic business communications system for the City of London. Existing conflicting commercial interests in these areas make a government "pump-priming" role essential.

Britain must also make a greater effort to find a place in the international market, says the report. British suppliers, with a few exceptions, are heavily dependent on the UK market, and particularly on government procurement. "Moreover government procurement and research and development funding is not being directed as effectively in the United Kingdom as it is elsewhere", it says — casting an envious eye at France, Germany, Japan and the United States. Nevertheless, says PA, there are signs that the government — and British Telecom — is waking up to the fact.

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● "A Strategy for Information Technology" is available from PACTEL, Rochester House, 33 Greycoat Street, London SW1P 2QF