committee stage ends, probably before the Easter recess.

Under the new arrangements, British Telecom will be able to manufacture and sell attachments only through independent subsidiary companies. Financing such ventures, however, will be difficult within the government's constraints on public borrowing. This is one reason why the government has amended the bill to allow British Telecom access to private finance. It may allow the corporation to work outside the public sector borrowing requirement, an issue not finally settled by the Treasury. One difficulty is that, whatever the source of capital, the government is still ultimately the guarantor.

In the next few months, equipment manufacturers will be keenly waiting to see how the removal of the monopoly is to be staged. The plan is to have a transitional period of three years during which the Department of Industry would control the market, giving British manufacturers time to plan for free competition. Much will depend on the Secretary of State for Industry, who is given wide enabling powers by the bill. Another open question is the arrangements for value added services. The bill gives the Secretary of State power to instruct British Telecom to allow private companies to lease part of the public network for the provision of services to third parties. What Sir Keith finally decides may depend on the outcome of a study by Professor Michael Beesley of the London Business School. Judy Redfearn

Carcinogen criteria

US retracts

Washington

Pressed by a recent Supreme Court ruling, US occupational safety officials have agreed to relax their previous opposition to including risk assessment calculations in decisions about reducing exposure to potential carcinogens. Hitherto, officials of the Department of Labor's Occupational Safety and Health Administration (OSHA) have argued that the scientific uncertainty of risk calculations - and the lack of an explicit requirement in the agency's authorizing legislation - meant that they should not be used as the basis of policy decisions. Instead, they have maintained that that once a substance has been demonstrated as a potential hazard, exposure should be lowered to the "lowest feasible level".

OSHA is being required to shift its position as a consequence of a decision by the Supreme Court last summer to strike down regulations which the agency had proposed for limiting industrial exposure to benzene (*Nature* 286, 97; 1980). The court ruled that OSHA had failed to demonstrate that reducing benzene exposure limits from ten to one parts per million would reduce the level of "significant risk". Following this ruling, OSHA has now announced that it is revising its generic carcinogen policy, introduced last year as a mechanism for regulating any chemical suspected of causing cancer.

Under the terms of this policy, any chemical which meets one of a number of criteria — for example, which is shown to cause cancer in one experiment with laboratory animals, and also produces a positive result in a short-term test — is automatically labelled a carcinogen.

Originally, this would have been sufficient to invoke automatically the requirement that exposure be reduced to the lowest feasible level. Now OSHA officials have agreed to include consideration of whether the chemical poses a significant risk — using a variety of data to make this judgement, including court interpretations of previous rulings, OSHA's previous experience in regulating toxic substances and "prudent occupational health policy".

According to an announcement made in the *Federal Register*, three aspects of the benzene decision will be incorporated in the cancer policy. First, the significance of existing risk must be estimated before issuing a carcinogen standard; second, the exposure level must be set at the lowest feasible level which is "reasonably necessary or appropriate to eliminate significant risk"; and third, that OSHA must consider "all relevant evidence" in making such determinations.

This change in policy represents a significant shift from OSHA's previous position. The agency's former head, Professor Eula Bingham, has described risk assessment calculations as "abhorrent" to public health administrators; and the agency has strongly resisted pressure from government economists to push occupational regulations into a neatly quantifiable mould.

At the same time, the shift does not go as far as many in industry would like. Their demand is for full-scale cost-benefit analysis of all occupational health and safety regulations, based on the argument that federal controls have become a major economic burden. Although the Supreme Court, in striking down the benzene regulation, did not make the widely expected pronouncement on whether cost-benefit was required to demonstrate that a new regulation was "reasonably necessary", it is expected to do so in ruling on another case which has been brought against OSHA on cotton dust standards.

In any case, agency officials expect that a demand for full-scale cost-benefit analyses of future regulations — with the requirement that the least expensive option be adopted — will be one of the first ways in which the new Administration will try to meet its election promise of reducing the force of government regulations.

The labour movement, which has consistently argued that cost-benefit analysis is little more than a smokescreen designed to cover the relaxation of safety and health controls, is preparing for a fierce and lengthy battle. It has already complained about one of Mr Reagan's first antiregulation acts, withdrawing new regulations published by OSHA in the last days of the Carter presidency which would have required the labelling of all hazardous chemicals used in the workplace.

David Dickson

Greenhouse effect

Act now, not later

Stockholm

The theme that the time has come for policy-makers to take account of carbon dioxide when drawing up energy policies ran through an Earthscan meeting on carbon dioxide, climate and, energy last week. But speakers' conviction that action should be taken now was matched by their caution in predicting exactly what would happen if carbon dioxide emissions continue to increase.

The fundamentals are broadly agreed. The pre-Industrial Revolution atmospheric concentration of carbon dioxide was about 290 parts per million, and the burning of fossil fuel has been the largest single factor contributing to concentrations which are expected to double by the middle of the next century, assuming a 2 per cent annual growth rate in the use of fossil fuels.

The reality of the greenhouse effect was also common ground between the speakers. Predictions about specific climatic changes in specific parts of the globe were, however, more equivocal.

Current models, according to Professor Bert Bolin of the University of Stockholm, are inadequate but "they are all we have". The models are especially inadequate in dealing with the role of clouds and the interaction of the atmosphere and the oceans. Dr Tom Wigley of the University of East Anglia pointed out the difficulties of distinguishing the signal from the noise: knowing when variations in regional climates stem from a particular factor such as carbon dioxide and when they are simply part of the continual natural variation.

Professor S.K. Sinha from the Indian Agricultural Research Institute in New Delhi was the only speaker daring to be at all optimistic, and even his belief that agriculture could adapt to climate changes was conditional on fruitful research being done on water management, the identification of new genotypes more tolerant of temperatures 3–4°C greater than at present and on higher crop yields with a smaller input of fossil fuels..

The most eloquent plea for energy policies to take account of carbon dioxide came from Gus Speth, chairman of President Carter's Council on Environmental Quality. In the last days of the Carter presidency, the council urged that "full consideration" should be given to carbon dioxide in the development of