

Research is no substitute for political action on climate

Tax incentives and other measures to encourage energy efficiency are needed to curtail the growth of US carbon emissions. Calls for more research, though important, should not be used to obscure this fact.

The idea of a government-sponsored or international initiative to develop non-carbon energy sources, proposed last week by Hoffert *et al.* (*Nature* 395, 881–884; 1998), should sound alarms in one respect, at least: results of previous energy technology drives have not always been encouraging. Governments invested billions of dollars in the research, development and demonstration of nuclear power in the 1950s and 1960s, but ultimately the technology failed as an economically competitive energy source when its full life-cycle costs were taken into account. In the United States twenty years ago, significant funds were directed at renewable energy by the Carter administration. Much effort was wasted on 'demonstration projects' that featured little genuine innovation. With these histories in mind, there is all the more onus on its proponents to show that the proposed energy R&D would work out differently.

A year ago, a panel of the President's Committee of Advisors on Science and Technology, chaired by John Holdren of Harvard University, made the case for an expanded energy R&D programme. Their report prudently stressed the importance of a broad research portfolio. Holdren would not argue that his recommendations would greatly influence US energy use in the near term. Yet that is the claim that the Clinton administration is now making for the far smaller research package that it extracted from recent budget negotiations.

In fact, technology support, while important, is only one of the things that the United States should be doing to curtail its emissions. Encouraging energy efficiency is not rocket science. It merely requires a little political courage, which has not been forthcoming thus far from President Clinton. He has proposed, for example, a tax incentive to encourage people who buy big cars to buy big cars with better fuel economy instead. An incentive to encourage the purchase of small cars was rejected as too rude to Detroit,

which can't produce small cars efficiently.

Clinton may be cautious, but his opponents in the Congress make him look like a reckless adventurer. For example, conservatives in the House of Representatives have been obstructing the introduction of federal standards for the efficiency of domestic appliances. They base their objection on the view that a federal government notice on a washing machine, announcing its average wattage, is one step too far down the slippery slope to state intervention in the lives of ordinary Americans. Perhaps its real basis is more to do with makers of inefficient washing machines, who find political contributions to be less financially exacting than modern industrial design.

Where the political will exists, significant emissions cuts can be made today, without recourse to exotic technology. In this regard, it is encouraging to note that Senator Connie Mack (Republican, Florida) is supporting a bipartisan measure that would prepare the ground for future tax credits for corporations that take action to reduce emissions now (see page 7). Mack is a staunchly conservative senator, but most of the people in his state live barely a few feet above sea level, and may be reluctant to participate in a lengthy experiment to establish whether political paralysis is an adequate response to the mounting scientific evidence for man-made climate change.

There is a role for government in supporting the scientific research needed to underpin a healthy, climate-neutral energy supply industry. It will then be largely up to that industry to implement the technologies that will cut carbon emissions, and it will only be tempted to do so when the right price and tax incentives exist. For now, when governments talk of research programmes to counteract climate change, there is a danger that they are placing a fig-leaf over their own failure to put such incentives in place. □

Reform in name only

Using threats to force the formation of semi-autonomous 'agencies' in Japan is a flawed strategy.

In bulldozer fashion, Japan's Prime Minister Keizo Obuchi is trying to force through plans to convert large numbers of national research institutes and possibly some universities into semi-autonomous corporations or 'agencies' by threatening to cut the budgets of those that do not comply by 30% (see page 7). If Obuchi's zeal were driven primarily by a proper understanding of the need to make Japan's universities and national institutes more accountable, more independent and more performance driven, his move should be applauded. Sadly, that does not seem to be the case.

Rather, his prime motivation seems to be to go one up in the public eye over his more charismatic predecessor Ryutaro Hashimoto, who initiated the administrative reform, by converting as many as 100 government institutions into 'agencies', so that the new administration can claim to have trimmed the government significantly.

So determined is Obuchi to achieve this goal that national institutions are reportedly being offered the carrot that if they convert to 'agencies' they can keep exactly the same budgets and staffing arrangements as they currently have. As one top official from a leading national research institution wryly observes, he would prefer to stay within the government's fiefdom, have the institution's budget cut by 30% and thereby have the grounds to clear out some of the dead wood among the staff that he has wanted to remove for years.

But the cuts seem unlikely to materialize. Preservation of budgets is the *raison d'être* of all bureaucrats in Japan's science-related ministries and agencies. Most government researchers want to maintain the status quo, and even some of Obuchi's colleagues in the ruling Liberal Democratic Party are openly expressing doubts about the reform plan. Much-needed change in Japan's government research system is likely to remain elusive. □