

'No net cost in cutting carbon emissions'

[WASHINGTON] The United States could cut carbon emissions to 1990 levels by 2010 with no net cost to the nation's economy, according to a Department of Energy (DOE) report. This reduction could be achieved by increasing the country's use of energy-efficient technology, says the report, which was released in Washington last week.

But the federal government would first have to invest "far beyond current efforts" in developing and promoting that technology. In fact, say the study authors, meeting the goal will require a "major effort to reduce carbon emissions through federal policies and strengthened state programmes, and very active private sector involvement".

The report, the product of a year-long study by five DOE laboratories, looked at ways for some 200 technologies to improve energy efficiency in four sectors of the economy: buildings, transportation, industry and electric utilities.

It concluded that actions such as switching to natural gas instead of electricity for residential use, replacing coal-burning plants with plants that use natural gas, and increasing reliance on biofuels such as ethanol for transportation, could reduce the nation's energy bill by between \$50 bil-

lion and \$90 billion a year. That sum would be enough to offset the cost of developing and switching to the new technologies, according to the report.

The study's analysis relies heavily on the assumption that industry would also be allowed to trade carbon emissions on the open market. Assuming a trading price of \$50 per tonne of carbon and greater use of energy-efficient and low-carbon technology, emissions could be reduced by 390 million tonnes per year, bringing them back to 1990 levels. This strategy, combined with next-generation energy technologies, could lead to even greater reductions in the next quarter-century, according to the DOE analysts.

Their conclusions are in line with a 1992 study by the National Academy of Sciences and a 1991 assessment by the congressional Office of Technology Assessment.

The DOE report, which was reviewed by outside scientists and economists, gives ammunition to those hoping that the United States will commit itself to mandatory greenhouse gas reductions at the international conference in Kyoto, Japan, in December.

In Kyoto, the United States will be under political pressure from European and other countries to agree to reduce greenhouse



Solar futures? Greater efficiency could cut energy bills, offsetting the costs of new technologies.

emissions to at least 1990 levels by 2010 (see *Nature* **388**, 614; 1997).

But the Clinton administration is still playing its cards close to its chest as it prepares for the meeting, and has not disclosed any proposed targets or timetables.

Industry lobbyists have fiercely opposed mandatory targets, and the new DOE report is unlikely to sway them. These critics have claimed that reducing greenhouse emissions to 1990 levels would cost Americans as much as \$2,000 per household in 2010. The American Petroleum Institute (API) estimates that capping carbon-dioxide emissions in the short term could reduce US gross domestic product by two to four per cent — the equivalent of \$200 billion to \$350 billion per year.

William O'Keefe, API's executive vice-president, who also chairs the industry-sponsored Global Climate Coalition, last week dismissed what he called "ongoing administration efforts to perpetuate the self-contradictory myth that 'free lunch' technologies are readily available" to solve the greenhouse emissions problem.

While the Global Climate Coalition supports government investment in new energy technologies, said O'Keefe, "neither the price nor the timing of major technological breakthroughs can be predicted". He also indirectly accused the DOE of self-interest in arguing for increased investment in clean technology. "The DOE national laboratories may need a new mission now that the Cold War has ended," he said.

Meanwhile, government officials, scientists and corporate leaders will meet next week to discuss global warming policy at Georgetown University in Washington. President Bill Clinton, who is hosting the conference, may use the occasion to be more specific about US plans for meeting greenhouse targets.

Alternatively, Clinton may leave the specifics of the plans to the US representatives attending a pre-Kyoto meeting in Bonn, Germany, later this month. **Tony Reichardt**

Japan's ministries argue over greenhouse target

[TOKYO] Japan's efforts to set a binding target for a cut in greenhouse gas emissions were set back last week when the three government ministries involved failed to agree on a joint position.

Prime Minister Ryutaro Hashimoto had asked the three ministries — the Ministry of International Trade and Industry (MITI), the Environment Agency and the Foreign Ministry — to agree on a target by the end of September.

But agency officials are still locked in negotiations (see *Nature* **387**, 641; 1997), and it is widely believed they are unlikely to reach an agreement until the middle of October at the earliest.

Hashimoto wants Japan to take a strong stance at the review conference of the UN Framework Convention on Climate Change, which takes place in Kyoto in December.

The Japanese govern-

ment has already said it considers a European Union proposal for a 15 per cent cut from 1990 emissions levels by the year 2010 to be unrealistic.

In an interim report submitted to the prime minister last week, the Environment Agency proposed that emissions of carbon dioxide and other greenhouse gases be cut by 7 per cent from the 1990 levels by 2010, and the Foreign Ministry suggested a 6.5 per cent cut. But MITI is said to want no reduction from 1990 levels.

At a joint council of a government advisory panel last week, MITI submitted a plan to cut carbon-dioxide emissions to 1990 levels by 2010 through doubling nuclear energy production and using alternative energy sources such as solar power.

MITI officials say further reductions in carbon-dioxide

emissions beyond that level could seriously damage the economy, and an overall target as proposed by the Environment Agency would create major difficulties.

MITI's position is based on the fact that the measures required to reduce greenhouse gas emissions — such as reducing traffic in Tokyo — would require the complex revision of regulations over and above those concerning energy conservation.

The ministry has also clashed with the Environment Agency about whether to set a per capita reduction of greenhouse gases, favoured by MITI, or the flat-rate reduction that the Environment Agency wants.

With only two months left until the Kyoto meeting, which Japan is chairing, the delay is expected to attract criticism from other signatory nations which have been calling on Japan to clarify its reduction target. **Asako Saegusa**