

## US energy chief flags carbon tax

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\*\*Please note: this article appears to be an accidental hybrid of story materials\*\*

US ENERGY Secretary Steven Chu has floated the idea of a carbon emissions tax to fight global warming.

During the US presidential campaign, the notion was kept largely on the back burner as candidates were reluctant to promote the idea of costlier energy at a time when petrol prices were soaring.

But since the Obama Administration took office in January, Congress has been working on a system for swapping greenhouse gas emissions quotas similar to the one used in the European Union.

In an interview with The New York Times, Dr Chu, a Nobel laureate in physics, said "alternatives could emerge, including a tax on carbon emissions".

A new study has suggested that climate change could severely affect the world's fisheries, with key species migrating towards the poles.

"The impact of climate change on marine biodiversity and fisheries is going to be huge," said its lead author, William Cheung, of the School of Environmental Sciences at the University of East Anglia in Britain.

Dr Cheung's team used a computer model, based on knowledge of 1066 species of fish, to predict what might happen by 2050 under three scenarios for global warming.

Warmer water would lead to "large-scale redistribution" of these species, with most of them moving towards the poles, shifting on average by more than 40 kilometres per decade, they said. Arctic Norway would benefit from an increased catch, but in sub-polar regions, the tropics and semi-enclosed seas, "climate change might lead to numerous local extinctions", hitting developing countries most of all, the paper warned.

Dr Chu said that solving the world's energy and environment problems would require Nobel-level breakthroughs in three areas: electric batteries, solar power and the development of new crops that can be turned into fuel.

Solar technology, he said, would have to get five times better than it was today, and scientists would need to find new types of plants that required little energy to grow and could be converted to clean and cheap alternatives to fossil fuels.

Having once said that coal was "a nightmare" in the way it was currently used, Dr Chu said the US must also lead the world in finding a way to burn the fuel cleanly, because other countries with big coal reserves, such as India and China, would not turn away from it.

But he added that such developments were not impossible.

At the turn of the last century, he noted, scientists such as Fritz Haber and Carl Bosch made Nobel-winning discoveries that led to the development of cheap nitrogen fertilisers, saving Europe from starvation.

"I think science and technology can generate much better choice. It has, consistently, over hundreds and hundreds of years," Dr Chu said.

He said that while President Barack Obama and congressional Democratic leaders had endorsed a so-called cap-and-trade system to control global warming pollutants, there were alternatives that could emerge, including a tax on carbon emissions or a modified version of cap-and-trade.

Dr Chu said reaching agreement on legislation to combat climate change would be difficult in the current economic climate because any scheme to regulate greenhouse gas emissions would probably cause energy prices to rise and drive manufacturing jobs to countries where energy was cheaper.

"The concern about cap-and-trade in today's economic climate," he said, "is that a lot of money might flow to developing countries in a way that might not be completely politically sellable." But he said he supported putting a price on carbon emissions to begin to address climate change.

One major decision facing his department is what to do about Yucca Mountain, a site 160 kilometres from Las Vegas chosen by Congress for burial of high-level radioactive waste. Mr Obama and Senate Majority Leader Harry Reid of Nevada have opposed the project.

Dr Chu said the political difficulties in trying to obtain a licence for the Yucca Mountain site should serve as a guide in searching for other nuclear waste repositories in the future.

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