

# THIS WEEK

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## America's carbon compromise

*As looming tax increases and budget cuts threaten to plunge the US economy back into recession, Congress should take a hard look at introducing a carbon tax as an important part of the solution.*

**T**his week, a reinvigorated Barack Obama returned to the White House knowing that he was poised on the edge of a fiscal cliff. Rather than relishing his victory last week, Obama must immediately set about crafting a compromise on deficit reduction with congressional leaders. The stakes could hardly be higher — for science, for US citizens and, indeed, for the world. In the event of failure, a budgetary time-bomb of tax increases and sweeping budget cuts will detonate on 2 January. As well as resulting in indiscriminate cuts to funds for scientific research and many other areas, it could knock the United States back into recession and deliver yet another blow to an already fragile global economy.

Faced with such dire consequences, one might expect that all the financial options would be on the table, especially the good ones. Unfortunately, this is not the case, at least not yet.

So far, lawmakers have rehashed long-standing disputes about the size of government and the social safety net, but have ignored ideas that could transform the fiscal challenge into an opportunity. One such proposal is the carbon tax, which could bring financial and political benefits for all and chart a new course forward for energy independence and global warming (see page 309). It is a solution that is every bit as improbable as it is logical, but one should remember Winston Churchill's assessment of the United States' tendency to do the right thing — once all the alternatives have been exhausted.

Just consider the possibilities. To put a levy on carbon would raise revenues that could be used to offset lower tax rates for individuals and businesses. This is what conservatives say they want to do. It would put more income — and thus choice — in the hands of consumers. Economists like the idea for more fundamental reasons. Generally, it is best to tax things that one wishes to discourage (such as smoking) rather than those that should be encouraged (such as working). Environmentalists like the idea of a carbon tax because it could generate some much-needed revenue for clean-energy research and development while reducing carbon emissions.

The numbers are not negligible. An analysis conducted in August by economists at the Massachusetts Institute of Technology (MIT) in Cambridge showed that a carbon tax of US\$20 per tonne of carbon dioxide from fossil fuels, if instituted in 2013 and increased by 4% per year, would raise \$1.5 trillion over the course of a decade. Averaged out, this amounts to \$150 billion annually — a sizeable chunk of the trillion-dollar deficits that the US government has been running in recent years. Scholars at the Brookings Institution, a centrist think tank in Washington DC, advocate ramping federal investments in energy research up from \$3.8 billion now to \$30 billion annually, to drive down the cost of low-carbon energy (including cleaner-burning coal). It is an ambitious proposal, and would leave a pile of cash that could be redistributed elsewhere for beneficial use.

Conservatives loathe taxes, and US politicians obsess over energy prices, but a revenue-neutral carbon tax would get around these

problems. The MIT analysis found that the economy benefited regardless of whether the money was reinvested in social programmes or redistributed in the form of lower taxes and cash payments to offset higher energy costs for the poor. For environmentalists, the problem with a carbon tax is that it does not technically limit emissions, but the MIT model suggests that it would perform quite well: carbon emissions fall to 14% below 2006 levels by 2020 as consumers and businesses find ways to reduce their energy use in response to higher prices.

**“A carbon tax would depend on political courage and a break with party orthodoxy.”**

Opposition to the idea may not be what it was. For example, on 13 November, the American Enterprise Institute hosted a conference in Washington DC on the economics of a carbon tax. The institute is a conservative think tank, and its officials have previously raised doubts about climate science. The idea has also been bubbling up in other right-leaning think tanks as a conservative solution to reduce greenhouse gases.

The problem is that to enact a carbon tax would depend on political courage and a willingness to break with party orthodoxy, rare traits in Washington today. President Obama has made energy and climate part of his agenda for the second term, but his first — and perhaps biggest — opportunity to make good on that promise will come in the next few weeks. As US politicians contemplate diving into the fiscal abyss, they would be wise to consider a painless policy that benefits everyone. ■

## A shaky restart

*Japan still has lessons to learn from Fukushima if it is to convince the public about nuclear energy.*

**T**he nuclear disaster that followed the March 2011 tsunami in Japan uncovered serious flaws in the country's nuclear-safety regulations. Japan learned its lesson: it started putting a premium on safety, and is doing everything it can to assure a wary public that similar mistakes will not be made again. Well, that was the hope. Two recent revelations show that it could still do much more.

The country's Nuclear Regulation Authority (NRA) was set up to right the wrongs of the previous regulatory infrastructure. One of its first tasks was to draw up new safety standards for reactor operations. The NRA formed an investigation team of six experts, which held its first meeting on 25 October. The team is expected to submit its report in time for the NRA to put the standards up for public comment in the spring and to make them law in July 2013.

Last week, Japanese media reported that four of those experts have