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the House in November's midterm elections, the final session of Congress was unexpectedly productive, including legislation that will aid science and technology. In addition to America COMPETES, it passed a bill giving the Food and Drug Administration sweeping new powers to regulate food safety. And the Senate ratified New START, a bilateral treaty with Russia to reduce nuclear arms.

Yet the last-minute push stands in contrast to a record that in many ways fell short of the expectations raised when the Democrats took charge of Congress in 2006, and Barack Obama became president in 2008. A House bill that included a cap-and-trade scheme for carbon emissions died in the Senate last year. Another to explicitly permit federal funding of human embryonic stem-cell research never made it to a vote. Legislation to tighten controls on toxic chemicals was introduced but failed to gain momentum.

In the Congress that convenes this week, the House of Representatives will be in Republican hands, making it even more likely that politically volatile bills, such as those involving climate change, environmental regulations and stem cells, will fail to advance. Less certain is the extent to which science will be hit by the spending cuts promised by the Republicans.

Currently, most of the US government is in a fiscal holding pattern, kept afloat by a 'continuing resolution' that extends the 2010 budget until 4 March. For many agencies this is already bad news. At the \$31-billion National Institutes of Health (NIH), for example, it means a hoped-for increase of \$750 million in the 2011 budget has effectively evaporated.

The best possible outcome for the NIH in 2011 would be "to maintain funding at 2010 levels," says David Moore, senior director for governmental relations at the Association of American Medical Colleges in Washington DC. But as the Republicans have proposed reducing non-defence spending to 2008 levels, even that seems a remote prospect. "It is relatively easy to see some sort of across-the-board cut imposed on federal agencies," says Moore.

NASA is in a particularly tricky position. In the NASA Authorization Act of 2010, which sets out the agency's budget request and programme priorities for the coming year, Congress voted for an additional space-shuttle flight in 2011, a new programme to develop successor vehicles and a halt to Constellation, President George W. Bush's plan to send astronauts ►

Cold comfort: the changing landscape of the US Congress could curtail the Democrats' plans for science.

POLICY

US science faces big chill

Spending cuts and political battles loom on the horizon.

BY IVAN SEMENIUK, MEREDITH WADMAN, EUGENIE SAMUEL REICH AND JEFF TOLLEFSON

"We came here to do a job. We got much of it done." So said Nancy Pelosi, former speaker of the US House of Representatives, at a press briefing on 22 December 2010. For US researchers, the occasion was significant. Pelosi, standing

alongside Bart Gordon, outgoing chairman of the science and technology committee (see page 10), had just signed a bill reauthorizing America COMPETES, the act that includes funding increases for basic research and educational programmes via the National Science Foundation (NSF) and other agencies.

For Pelosi and House Democrats there was reason to be upbeat. Despite losing control of

► back to the Moon. Yet under the continuing resolution, the agency must keep spending on the Constellation programme, which is budgeted at around \$7 billion per year. Keith Cowing, editor of NASAWatch.com, says it is hard to see how NASA can finance the shuttle flight while juggling everything else. "It's like trying to take a large truck and do a sudden left turn," he says. NASA may be especially susceptible to political wrangling in the new Congress because many influential Republicans, including Gordon's successor on the science committee, Ralph Hall (Texas), have NASA centres in their districts or states and support a strong manned-spaceflight programme. Their resistance will make it harder for Obama to give the agency a fresh direction.

Hall spoke against the reauthorization of America COMPETES, arguing that he would rather scrutinize and vote on each science programme funded by the bill than give agencies such as the NSF a wholesale increase. He has already singled out for criticism the \$900-million allocated to ARPA-E, a new agency of the US Department of Energy that promotes advanced energy research. ARPA-E originally had bipartisan support and Hall's scepticism came as a disappointment to Charles Vest, president of the National Academy of Engineering, who has championed COMPETES. "I believe the uniqueness and full importance of ARPA-E was missed," Vest says.

A battle over energy policy may well be inevitable because several incoming Republicans have expressed scepticism about climate change. Incoming chairman of the House Committee on Energy and Commerce, Fred Upton (Republican, Michigan), represents a moderate voice, but he has appointed more conservative lawmakers to chair his subcommittees.

John Shimkus (Republican, Illinois), who heads the new environment and economy subcommittee, made headlines in November when he quoted scripture to make the case that God would not destroy Earth through global warming. Ed Whitfield (Republican, Kentucky), who will head the new energy and power subcommittee, has already attacked the Obama administration's regulatory initiatives, in particular suggesting that the Environmental Protection Agency has not provided "compelling scientific evidence" to justify its climate regulations.

With government scaling back spending, and concerns about economic growth at the forefront, any attempt to curtail emissions is likely to face strong opposition on economic grounds. Abraham Lincoln famously observed that "a house divided" cannot stand. For US scientists, 2011 may be the year that demonstrates that a government divided cannot move. ■

C. OWEN/NATURE

Q&A Bart Gordon

Going out on a high

After 25 years in the US Congress, Bart Gordon (Democrat, Tennessee), the chairman of the House Committee on Science and Technology, officially stepped down on 3 January. An ardent champion of science, he has served on the committee throughout most of his time in Washington DC and has led it since 2007. In 2007 he was instrumental in creating the America COMPETES Act, which aims to double funding for basic research in the physical sciences over a ten-year period and improve science education in US schools. One of his final acts as chairman was successfully shepherding a renewal of COMPETES through a politically polarized Congress. The act will be signed into law by President Barack Obama this week.

Why is America COMPETES so important to you?

The United States needs to be able to increase its investment in research. Research leads to innovation; innovation leads to jobs; jobs leads to more taxes, which then pay for more research. I have a 9-year-old daughter and I am concerned about her future and our country's future. There are approximately 7 billion people in the world, and half of those who are working make less than \$2 a day. So unless we continue to innovate and unless we have a skilled workforce, we are going to see our standard of living decrease.

How will it be possible to invest more in research when many are calling for cutbacks?

It's going to be a challenge. We're seeing a little increase in the public-sector research dollars and we're seeing a decrease in private-sector funding. In the rest of the world many are

trying to do both: their private and public sectors are investing more. We're going to have to rally the private sector, the universities and everyone who cares about this to show its importance.

Is science playing a greater or lesser part in US policy-making?

I think President Obama has put a strong marker down that he wants to see science take a greater role. He has brought together an unheard of number of high-calibre scientists [in his administration] that I think are helping to do this. The thing that I've found is that whether it's John Holdren [director of the

White House Office of Science and Technology Policy] or [energy secretary] Steve Chu, you have these top-notch scientists in their own fields

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For more on the changing US political landscape see: go.nature.com/5pymwq