

and talking about energy." Many gubernatorial candidates, including Wisconsin's Doyle and Ted Kulongoski, Democratic governor of Oregon, are advancing some version of the '25 by 25' pledge — the broad-based push to produce 25% of the country's energy from renewable sources by 2025.

The issue has come into play in closely fought Senate races as well — and again on both sides of the partisan divide. In Washington state, Democratic senator Maria Cantwell is posing with wind turbines even as her Republican opponent proclaims his support for heavy investment in alternative energy. In Tennessee, Democratic candidate Harold Ford runs adverts wherein he strides across fields of soya beans grown for biofuel. In New Jersey, Republican challenger Tom Kean says that, "unlike President Bush," he doesn't think America can "drill its way to energy independence".

The interest in energy issues runs deep. Earlier this year, the liberal citizens' group MoveOn.org staged more than 1,000 house parties, asking attendees to name the issues they thought the group should press hard on for the elections. "There were just two issues that came up at every one of those house parties," says Eli Pariser, executive director of MoveOn's political action committee. "One was health care and one was energy." For Pariser, the issue is about more than oil prices and geopolitics: "There is this sense of a grand scientific exploration in the style of the campaign to put a man on the Moon. People are

The push towards using clean energy sources, such as biofuel derived from crops, has been used by some candidates to woo floating voters.



hungry right now to be asked to be part of a big project."

But some routes towards energy independence involve extracting non-renewable energy sources — such as drilling in the Arctic National Wildlife Refuge, a plan pushed heavily by Ted Stevens, a Republican senator from Alaska. The drive for energy independence shouldn't eclipse the message of preparing for climate change, argues Alden Meyer, director of strategy and policy for the Union of Concerned

Q&A



Representative Rush Holt is a rare thing in the US Congress — a bona fide scientist building a promising political career. Since his election for the 12th district of New Jersey — the one containing Princeton —

eight years ago, this former physicist and son of a West Virginia senator has garnered several powerful committee slots. Holt has emerged as one of the Democratic Party's most prominent spokesmen on science, education and security. **Colin Macilwain** asked him about the life of a scientist on Capitol Hill, and what the mid-term elections could mean for science and education.

What difference would it make to science, or to scientists in America, if the Democrats took control of the House of Representatives?

The atmosphere in Washington is more politically partisan than I have seen in half a century, and it even affects things like science. I've never believed that science is completely removed from policy or politics. But many scientists would say they are appalled at the way a political game has been made of science, such as intelligent design in the schools, where both the president and some in Congress have said that both this and evolution should be taught. And climate change — until very recently it's been difficult to get anyone to acknowledge that there is climate change and that there is any connection with human activity.

Are scientific issues arising as issues in campaigns around the country?

Not as major issues, but in my district there is a kind of frustration that we've been unable to deal with energy problems

— it might be high fuel prices, but somewhere in the voters' minds it is connected with a failure to find alternatives to fossil fuels, and a failure to listen to scientific analysis on climate change and that sort of thing.

Do the Democrats have a programme for science, technology and education — and, if so, what is it?

It may not be as well known or as well understood as we would wish. We do have a good message ["The Innovation Agenda"] released six or eight months ago. It calls for nationwide broadband, a greater investment in research and greatly increasing the number of trained science teachers in the schools.

But isn't it true that, historically, Republicans are likely to spend more money on research and development?

The president has acknowledged that the physical sciences have languished, but in the latest budget, not much has come through. So I'm not willing to elevate him to the hall of fame.



Scientists in Washington DC. “Unless you work in the global-warming message as well, there are some proposals — such as turning coal into liquid fuel — that could wreak havoc with the environment,” he says. “You have to bring in the longer-term fossil-fuel dependence as well.”

Climate change offers less political mileage than energy independence. That may reflect the current American view: in June, a poll conducted on a number of issues by the Pew

Research Center for the People and the Press found that, although 64% of respondents thought energy policy was “very important” to them, only 44% said the same of global warming. Nevertheless, in tight governors’ races in Rhode Island and Massachusetts, candidates have divergent stances on the Regional Greenhouse Gas Initiative, a seven-state scheme for limiting greenhouse-gas emissions.

A. MANES/AP

Capitol gains

Back in Washington DC, where several powerful representatives have notoriously sceptical views on climate change, the elections could significantly shift the balance of who gets listened to the most. If the Democrats take back either house of Congress, the chairmanship of all committees will switch from Republicans to Democrats. And chairmen and chairwomen have the power to call hearings on topics of particular interest — or to call witnesses such as novelist Michael Crichton to criticize the current state of climate-change research, as happened last year in the Senate’s Committee on Environment and Public Works.

If Republicans lose control of the House, accusations of scientific politicization could gain a higher profile. “I think there would be more investigations if the House changes,” says Kurt Gottfried, president of the Union of Concerned Scientists in Cambridge, Massachusetts. For instance, California Representative Henry Waxman — a Democrat who has been active in pursuing conflict-of-interest issues at the National Institutes of Health and other agencies — is in line to gain the chairmanship of the House Committee on Government Reform.

Representative Bart Gordon (Democrat, Tennessee), meanwhile, is in line to gain control of the House Committee on Science if the House switches majority. As such, he might call hearings on the accusations of scientific censorship at NASA and the National Oceanic and Atmospheric Administration, says Joel Widder, a policy adviser at the lobby group Lewis-Burke Associates in Washington DC. “The politicization of science and politics affecting scientific decision-making would clearly be issues that he would explore,” Widder says. If the Republicans maintain the majority, the same committee might be headed by former Democrat Ralph Hall of Texas, global-warming sceptic Dana Rohrabacher of California or physicist Vernon Ehlers of Michigan.

Which party wins may also influence how science budgets are distributed among agencies and across disciplines, as Congress is in charge of doling out money for scientific research. But the total pot of money for science isn’t likely to grow, as the United States continues to struggle to pay for the war in Iraq and unexpected expenses such as Hurricane Katrina, on top of a growing deficit. “It’s not like the Democrats are going to open the treasury and fix all the budget problems that all the science agencies are screaming about,” says Widder. “I think that the budget environment is likely to be so constrained that it doesn’t matter who’s in charge.”

No matter what happens on 7 November, the face of US science is likely to change. And on 8 November, campaigners from both parties will be picking themselves up, preparing for the new Congress to convene in January — and realizing it’s never too early to start planning for 2008. ■

Reported by Geoff Brumfiel, Meredith Wadman, Emma Marris and Heidi Ledford.

See Editorial, page 724.

What about involving the public in decision-making? A lot of discussion happens in Europe but it doesn’t seem to get much traction in the United States.

I think it is fair to say, and unfortunate to note, that the public is not driving the science agenda. I wish they were. In the United States we have found ourselves in a position where the public says, ‘science is for the scientists, but not for me’. Not often do any non-science or non-engineering constituents come to me with science or technology on their list, and I imagine that’s true for other members of Congress as well.

You’ve said that most people in Congress tend to view science as a special interest, albeit an intelligent one. Have you seen much change in how Congress views science?

The public’s appreciation of science is no better, and maybe a little worse, than a decade ago. In official Washington, scientific subjects have become really politicized. There should be debate about the policy that is derived from science. But, historically, if science puts limits on the choices that are possible, the politicians would accept that. Now, by treating science as just another topic to be dealt with ideologically, or to be part of political

trades, they will even ignore the laws of science.

You decided not to seek a berth on the science committee but to look to more general committees instead. Was that a good choice?

The greatest need here is for scientific expertise in those areas that are not obviously scientific. On funding for NASA or for Antarctic research, we get pretty good scientific advice. But on ‘how do we get reliable elections’ or ‘what is the effect of good transportation planning’, which are to most Americans not obviously scientific, we have the greatest need.

Do you find your fellow congressmen receptive to a bit of scientific knowledge?

Yes. People will listen to me on some subjects more than just an average colleague. Am I as influential as I’d like to be? No — but I work at it.

What is your proudest achievement in the Congress?

It has nothing to do with science, and it is not even easy to describe. But it is building a sense of respect for government, or to put it another way, beating back the cynicism about government, at least within my own district.