

THE EDITORS' BLOG

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Hillary Brings Up Science, but Will It Stay in Play?

Posted by Nikhil Swaminathan, Oct. 8, 2007

Save for the media swarm in the wake of the hand raises by Republican candidates Sam Brownback, Mike Huckabee and Tom Tancredo, it appears Hillary Clinton is the first to put science in the spotlight in the race for the White House.

Speaking on the 50th anniversary of the Sputnik launch last Thursday at the Carnegie Institution for Science, Clinton took the opportunity to talk about Bush's less publicized war—the one on science. She also released, via her Web site, an "Agenda to Reclaim Scientific Innovation."

She covered all the highlights of science and policy: stem cells, the mess at the FDA, budget woes (at agencies from the NIH to DARPA), space exploration (both manned and unmanned), climate change and renewable energy. While these issues are likely not new to readers of this publication and other science-savvy individuals, it's heartening to see them introduced on the political stump.

Of course (and here's my cynical streak erupting from my bile-filled belly), this speech was at the Carnegie Institution for Science. What was she going to talk about? Tax cuts for the rich?

Within the context of the entire Clinton campaign, this is something Chris Mooney, author of *The Republican War on Science*, and his colleague Matt Nisbet would call "framing." Hillary's platform is no doubt broad and has primarily focused on Bush's more well-known war, health care, education reform and whether or not she wants to powwow with some of the more controversial world leaders in power today. But on this day, she chose to focus on science.

Rather than framing, I call this "playing to the crowd." (I will consider calling it framing as soon as Mooney and Nisbet admit they are writing a book about framing in the Gladwellian mold, which, lucky for them, a recent *Wired* article can help them title and turn into a cash cow. For those interested,

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ing Carbon Markets Work," by David G. Victor and Danny Cullenward, discusses both these options and how they could be implemented fairly and effectively.

Second, all nations should invest significantly more in new technology—especially in the development of carbon capture and storage methods—to stabilize the amount of climate-warming gases in the atmosphere. Government action on this front will be necessary because even well-intentioned efforts by private industry are bound to fall short.

Last, rich countries should establish

a Marshall Plan–like program to help finance the transfer of the low-carbon technologies that developing countries need to grow their economies while emitting fewer greenhouse gases. Instead of targets for cuts, developing countries should be given incentives to lower atmospheric releases, perhaps by rewarding them with energy development aid when emissions fall below certain levels.

Talk is cheap. It's time for politicians to stop spewing hot air and start enacting hard limits on dangerous emissions. ■

Sustainable Developments

Meaningful Goals for Climate Talks

Step-by-step advances, not grand gestures, offer the most realistic way to control greenhouse gases

BY JEFFREY D. SACHS



Governments of the world are now launching climate change negotiations for after 2012, when the Kyoto Protocol expires. World leaders acknowledge that civilization is on a dangerous course. Yet there is still little consensus about how to achieve stabilization of greenhouse gases.

We suffer no shortage of ideas about the instruments of action. For example, the world's governments could impose taxes on carbon emissions that are high enough to choke off the use of fossil fuels in favor of higher-cost but cleaner alternatives. Or they could impose a system of tradable permits that would have the same effect. The problem is not mainly with the instruments but with their unknown costs and benefits. We know we need to

act immediately, but because of big uncertainties regarding key technologies, we cannot precisely calibrate the costs and benefits of alternative actions.

The biggest obstacle is that the most promising scalable technologies, such as carbon capture and sequestration (CCS) and plug-in hybrid vehicles, are close to introduction but not quite there yet. China and India probably will not bet their future on CCS until the technology is proved, yet neither country has even one demonstration plant. Similarly, it is a little early to count on plug-in hybrids delivering 100 miles per gallon, a goal well within reach, until the first one rolls off the assembly line, with batteries that are safe, efficient, long-lasting and reliable.

How then can the world agree on meaningful targets and avoid a 10-year squabble or empty gestures? Rather

*It is a little early to count on plug-in hybrids delivering 100 miles per gallon.*

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myself included, Mooney will be further breaking down the elements—or frames—of the speech all week on his blog.)

But leaving the semantic discussion on framing, I am more concerned with whether this speech will just fade away to the bottom of Clinton's bullet-point list of stances or whether such a strident call to arms will necessitate others (both Democrat and Republican) to refine their ideas about the role science plays in the next election.

I would like to see some alternative options to Clinton's proposals from other candidates because, frankly, this is a topic that's important to me. There is plenty here to tweak, massage or offer alternative ideas to: the issue of manned versus unmanned space exploration, new ideas for improving science education, how to increase the number of women pursuing science degrees, and so on. The hope is that the Obamas and Edwardses (and to a less likely extent the Giulianis and Romneys of the world) won't just say, "Hey, that sounds good, just fold all that business Hillary was talking about into my campaign, as well."

But will anyone step up and take what Hillary has proposed and run with it? Will Hillary even mention the subject in similar breadth and depth when it's not a significant scientific anniversary and she's not standing in front of a group of researchers?

With all the aforementioned highlights, it seems as though, if science and technology are going to have their day in the political arena, now would be the time. Hell, just days before Clinton's speech, Michael Griffin, NASA chief, admitted that China will likely beat the U.S. back to the moon. Do we have to wait another 10 years for another communist country to beat us to a space goal before we reprioritize science in our culture? (That last time really served to chap our collective hide.)

If no one else in either party puts their chips down, remember New York mayor (and rumored independent presidential candidate) Michael Bloomberg has been there, done that.

Hey, Hillary, can you say "running mate"?

than aiming for a single grand outcome from the new round of negotiations, we should proceed in meaningful steps, taking ground where we can at known low cost and aggressively proving the new technologies that we will need. For example, it would be possible now to seal an international agreement in which the rich countries will pay the poorest countries not to cut down their forests, because the evidence is very clear that most deforestation can be avoided at low cost (perhaps \$10 per ton of avoided carbon dioxide) and with enormous global ecological benefits.

It would also be possible for the major coal-producing regions to agree to adopt several demonstration projects of CCS technology in the power sector. On average, each of these CCS power plants will require around \$300 million to \$500 million over 10 years beyond the cost of a conventional plant. China and India are prepared to introduce these unproved, more expensive yet cleaner technologies if the U.S., Japan and Europe help to pay for them. An agreement on financing at least two large-scale CCS projects in India and China could be achieved within the next few months.

A third area of agreement would be a worldwide public-private partnership on plug-in hybrids. A major global effort on battery design could provide the key technological breakthrough needed. A coordinated policy effort could help each region to prepare its power grid for a massive introduction of this new technology within the next five to 10 years. A fourth area would be shared, binding commitments to scale up the adoption of existing low-

emissions technologies, such as hybrids, diesel automobiles and energy-efficient lighting. These can be achieved by agreeing to impose standards on industries (for example, setting maximum emissions per passenger mile on new automobile sales) while leaving the precise choice of technologies for meeting those standards to the marketplace.

It is also within our grasp today to agree on overarching principles: that the world will aim to stabilize greenhouse gas emissions at safe levels no later than 2050; that countries will work together to develop and disseminate scalable low-emissions technologies; that the rich nations will pay for the bulk of research, development and demonstration and make the technologies available for global use equitably; and that the world will agree on progressively tighter and binding targets and market prices on emissions, as scalable low-cost, low-emissions technologies are developed and demonstrated.

Such a step-by-step approach will not produce a grand bargain in a single swoop. Instead it could demonstrate concrete and meaningful actions from the very start—and without years of wrangling. Within five years, there would be an excellent chance that proved, scalable and inexpensive technologies could support even bolder targets for greenhouse gas stabilization. ■

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