

Transition Recommendations — Department of Energy

Climate Change

Climate Change Preparedness

Toward developing DOE's role in supporting implementation of climate change response strategies, we recommend that the Secretary of Energy assess DOE's activities and capabilities in the following areas: What climate change mitigation and/or adaptation planning and technical assistance information is DOE currently providing on a routine basis, or might it produce in the future, that would support decisionmaking by state and local governments and other climate stakeholders? What outreach networks available via DOE might be used for planning and technical assistance decision-support communication with external users?

Right now there is a patchwork of policies and programs around the country to address the challenge of global climatic disruption in various ways, but they lack adequate federal support and a coherent federal counterpart. Whatever is negotiated on the international diplomatic front beyond the Kyoto Protocol, whatever emissions reduction legislation is enacted by Congress, and whatever energy technology R&D is carried out, there will be a host of climate change response strategy practical implementation issues to confront, from the national to the local level. How do we implement aggressive mitigation alternatives to reduce the rate and magnitude of climate change and attempt to avoid impacts that can't be managed effectively? How do we adapt to the unavoidable impacts of climate disruption on society and the environment?

The federal government must develop the institutional capability to support such a critical effort. We recommend the Obama administration develop a government-wide climate change preparedness planning and technical assistance program, aimed at working with states and local communities to develop practical real-world solutions to problems of implementing sustainable energy alternatives and achieving major emissions reductions, as well as assessing vulnerabilities to climate change impacts and developing adaptation measures.

DOE Climate Change Science Program

As the nation moves to develop and implement climate change mitigation and adaptation response strategies, we recommend the Secretary of Energy direct the Climate and Environmental Sciences Division in the Office of Science, and the relevant DOE labs, to significantly enhance support for DOE's research activities on climate change impacts and mitigation options.

DOE has participated as a key agency in the U.S. Global Change Research Program / Climate Change Science Program since its inception in 1989. DOE's climate change research has always focused primarily on what might be termed IPCC Working Group I, i.e., physical climate

system, issues — climate modeling with coupled general circulation models; radiative forcing of climate, e.g, cloud feedbacks, aerosols; the role of terrestrial ecosystems in the global carbon cycle, and so forth. Such activities make up 85-90% of the DOE climate science program budget.

But the DOE program also supports some, much more limited, IPCC Working Group II research, i.e., climate change impacts and vulnerability — such as research on the potential effects of warming, changes in precipitation, and elevated carbon dioxide concentration on terrestrial ecosystems. In addition, a small amount of the DOE program supports IPCC Working Group III, i.e., mitigation assessment, issues — in particular, Integrated Assessment modeling and research, and moving now to incorporate impacts and adaptation into IAMs.

The DOE climate science research budget for FY 2008 was \$128 million. The FY 2009 request was for \$146 million. All of the requested increase was for physical climate system research. All this work is important. But as the priorities in scientific assessment of climate change move from a predominant focus on the detection and attribution of anthropogenic warming, and projection of future warming, to a greater emphasis on understanding the observed and likely environmental and societal impacts of climate change, and on the comparative analysis of mitigation and adaptation response options, DOE should deploy its extraordinary research capabilities in playing a much larger role in advancing understanding in these areas.

DOE Organization

The National Coal Council, the official FACA advisory group for DOE's coal programs, appears to be heavily stocked with coal company CEOs. The language in their recommendations sounds like a pro-coal ad campaign; there is nothing that rings as "fair and balanced" or objective. They skirt the CO₂ problem. The Secretary should consider appointing more climate change / CO₂ / CCS experts to the coal council, or establishing an alternative advisory entity.

The Secretary should apprise himself of the presence of any Bush “shadow sympathizers” at DOE who might be positioned to undermine the Obama administration’s climate change goals. The *Washington Post* reported on November 22 (“Top Scientist Rails Against Hirings: Bush Appointees Land Career Jobs Without Technical Backgrounds”) that AAAS President James McCarthy at Harvard had criticized recent cases of Bush administration political appointees “burrowing in” to career federal positions with responsibilities for making or administering science policies, saying the result would be “to leave wreckage behind.”

We reported (http://www.climatesciencewatch.org/index.php/csw/details/jeffrey_salmon/) in 2007 on one such case of an administration official at DOE who had moved from Cheney speechwriter to participation in the development of a now-notorious oil industry-sponsored plan to wage a campaign against the mainstream science community on global warming, to the position of DOE Associate Under Secretary for Science, who has now burrowed in to an Office of Science Associate Director position. This may or may not be a problem, but we recommend the Secretary be mindful of how personnel issues might impact policy implementation.

The Secretary should consider giving the climate change technology program analysis group in the Office of Policy and International Affairs more clout in developing DOE climate-related

initiatives, including the opportunity at least to have input on setting energy technology R&D budget priorities.

Sustainable Energy

Overall funding for sustainable energy R&D

The Secretary of Energy's sustainable energy strategy should include getting the Energy Efficiency and Renewable Energy R&D budget stepped up to a level commensurate with the urgency of the energy system transformation that will be required for climate change mitigation.

The President's FY 2009 request for Energy Efficiency and Renewable Energy was \$1.256 billion, a 19% reduction from the FY 2008 level of \$1.560 billion (leaving aside Congressional earmarks). This included a 7% proposed cut in the solar energy R&D budget from \$168 million to \$156 million. The FY 2009 budget request for Energy Efficiency R&D included reductions for vehicle technologies and industrial technologies.

In contrast, the FY 2009 request for Fossil Energy R&D was for \$997 million, a 25% increase. Most of this amount consisted of \$818 million for the President's Coal Research Initiative, a \$237 million (29%) increase.

The FY 2009 budget level for the Coal Research Initiative outstrips the \$610 combined Renewable Energy R&D request for solar energy, biomass and biorefinery systems, wind energy, hydrogen technology, and geothermal technology, as well as the \$407 total Energy Efficiency R&D request for vehicle technologies, building technologies, and industrial technologies.

Sustainable Energy actions

Federal procurement of electricity from renewable energy. The federal government is the largest utility customer in the U.S., spending \$5.8 billion annually on electricity. The Secretary of Energy should promote a major investment in renewable energy technologies to power the federal government.

The administration should take several steps to strengthen DOE's activities in increasing energy efficiency, along the lines recommended by the Alliance to Save Energy, including:

Energy efficiency in state and local facilities. Request \$4 billion for DOE to make grants for energy efficiency projects in state and local facilities, including schools, through the State Energy Program. Studies indicate that less than 25 percent of all state buildings have had comprehensive energy-efficiency retrofits, which suggests that the potential for job creation and energy savings is quite large.

Energy efficiency improvements in federal buildings. Request \$1.2 billion for DOE to fund energy audits, metering and energy efficiency improvements in federal buildings.

Clear backlog of federal facility retrofit projects. Take immediate administrative steps to direct DOE to clear the energy efficiency upgrade project "backlog" of \$1.3 billion in major energy efficiency projects in federal facilities.

Weatherization of low-income homes. Request \$1.4 billion over two years to expand the national Weatherization Assistance Program, with funding to be used to expand infrastructure that is already in place to lower energy costs and thereby increase the purchasing power of low income consumers.

The Bush administration proposed to zero out the low-income weatherization program in its FY 2009 request, and at the same time doctored its web site to delete text stating this was an example of a successful, effective DOE program. (This little scandal was reported on Joe Romm's Climate Progress web site at the URL: <http://climateprogress.org/2008/02/07/bodman-as-orwell-doe-erases-most-successful-weatherization-program-from-website/>).

We have noticed that some states are devoting a portion of their Regional Greenhouse Gas Initiative funds to weatherization programs, to make up for the lack of funding from DOE.

Green jobs workforce training. Request funding for DOE programs that include training for industrial and building energy audits and building efficiency: \$100 million to the Building Energy Codes program and \$50 million for the Industrial Assessment Center program.

National consumer efficiency education campaign. Request \$90 million for the Public Information Initiative authorized in EPA Act 05 for a two-year education campaign, to be administered by DOE, targeted at the general public and designed to promote energy efficiency and conservation actions that can deliver work to home contractors, retailers, and manufacturers of efficient appliances and vehicles.

Carbon Capture and Sequestration?

The feckless and dilatory record of the Bush administration on the carbon capture and sequestration (CCS) R&D problem calls for a prompt and serious overhaul. We recommend the Secretary entrain a high-level team to expedite coming up with an answer to the question of whether it is feasible to "clean" up coal to the point that burning it is consistent with addressing climate change. If full CCS is feasible in a sufficiently near-term timeframe, this should be ascertained without the lengthy delay that has characterized the effort up to the present, funding for CCS R&D should be dramatically increased, and CCS should be implemented in a timely enough manner to avert the disastrous climate change consequences we are facing under business as usual.