Third AMS Presidential Policy Forum Focused On Administration Priorities in Climate Change Research and Technology

By Genene M. Fisher

The American Meteorological Society held its third Presidential Policy Forum on February 12, 2003, at its 83rd Annual Meeting in Long Beach, CA. Entitled "Administration Priorities in Climate Change Research and Technology," the Forum featured presentations by three top officials responsible for leadership of the climate change research and technology portfolio, each with a different perspective. First Dr. John H. Marburger III, Director of the White House Office of Science and Technology Policy provided an overview of the Bush Administration priorities in this area. Then Dr. James R. Mahoney, Assistant Secretary of Commerce for Oceans and Atmosphere and Director of the U.S. Climate Change Science Program (CCSP), presented an overview of the Climate Change Research Initiative (CCRI). The Honorable David Conover, Director of the Climate Change Technology Program (CCTP) gave an overview of the National Climate Change Technology Initiative (NCCTI).

Dr. Marburger spoke broadly about the Administration's priorities in climate science. Marburger noted that there are two different kinds of questions that make climate science worthy of policy consideration. First: how to predict climate, and more narrowly the weather, in order to prepare for economically damaging destructions? And second: to what extent does society (and its government) actually influence climate?

Marburger provided a brief history on the evolution of U.S. observational and modeling programs since the 1970s, recounting the steps leading up to the new management structure. To focus the U.S. investment in climate change science and technology towards setting priorities and further actions, President Bush created the CCRI and NCCTI. These programs are overseen by a cabinet level committee, the Committee on Climate Change Science and Technology Integration, which is co-chaired by Commerce Secretary Evans and Energy Secretary Abraham. This new management structure is a result of the President acknowledging that climate change has become a national issue with profound economic consequences, requiring focused activities on providing policy guidance.

According to Marburger, the Administration wants the new management team to focus relevant existing projects on the immediate needs of climate policy. He stated that no previous administration has put global change as vigorously on its agenda as this one. That is largely the result of rapid advances not only in understanding of climate mechanisms but also in the credibility of the overall climate enterprise. Marburger concluded by stating that, "This organization, the American Meteorological Society, is a very significant factor in that credibility. And your continued interest and involvement in policy relevant science is essential to the success of the new initiatives."

The second panelist, Dr. Mahoney, described the Climate Change Science Program. "Core to the program is transparency and openness," Mahoney stressed. To reinforce this, much everything about the program is on the website, www.climatescience.gov.

CCSP is budgeted at a little over 1.7 billion dollars a year. Total U.S. expenditure on global change work now exceeds 20 billion dollars. There have been tremendous accomplishments in

satellite observations, model development, and process development around the world. The scientific community has much to be proud of its involvement.

Mahoney acknowledged that the government has a very substantial taxpayer fund commitment to energy efficiency activities, tax credit and incentive activities, international collaboration, and underpinning the voluntary emission reduction program. He stated that, "there is great debate about whether anything is happening or not and the fact is that there is very much activity underway."

The relationship between CCSP and CCTP is an essential one. According to Mahoney, the core solution to the problem is breakthrough technology not yet commercialized or in many cases not yet developed. The CCSP is accelerating the application of basic climate research to evaluate the problem, the alternate paths forward and the solutions, and the role that can be played by technology in both mitigation and adaptation measures on a long-term basis. The science community must frame the problem, but not to over prescribe it to the extent they lose credibility.

Mahoney described the Climate Change Science Program and its four-part focus: science, observations and data, decision support resources, and outreach and education. The draft strategic plan was released in November 2002 and a workshop was held for open discussion on the draft plan. Over 1300 participants, including climate scientists, stakeholders, decision makers, and the international community attended this workshop in December in Washington DC. Mahoney discussed some of the general results and comments which are available on the CCSP website. The path forward includes a revised strategic plan by the end of April 2003, considering comments at the workshop, those submitted electronically (270 sets of comments), and the National Research Council review issued on February 26.

Mahoney concluded with a preview of the Earth Observation Summit to be held in Washington DC on July 31, 2003 for senior international government and non-government leaders in climate science, technology, and environment.

The Honorable David Conover, who was just appointed as Director of the Climate Change Technology Program only a month before, gave an overview of the Climate Change Technology Program. He is currently the only full time person at CCTP.

Conover stressed that, "People at the White House do believe that climate change solutions are about technology."

He stated that Secretary Abraham is making climate change one of his signature issues for this year. Energy is a major factor in dealing with and creating greenhouse gas emissions and that the path towards stabilization is a difficult one.

Efforts to achieve net "near zero" global greenhouse gas emission will be a long term undertaking, expensive compared to current technology, technologically challenging, and politically difficult. It might be that the technological challenge is easier than the political challenge.

It is important to improve the current suite of technologies, but breakthrough technologies are needed. Conover went on to discuss the various energy sources (i.e., solar, wind, biomass,

geothermal, nuclear) and their opportunities and limitations. He discussed the FreedomCar and the Hydrogen Fuel Initiative.

Conover described the idea of a virtually emission free multi-fuel plant. “If we can come up with a way to sequester carbon using some 450 years worth of coal that we have in this country, produce electricity and produce Hydrogen for fuel, we have achieved a zero-emission, electricity generating, Hydrogen fuel producing system that takes advantage of the most abundant resources for energy that this country has.”

Conover said that the CCTP looks forward to playing its role in this climate challenge. He identified some keys to the stabilization challenge. The Administration is already exercising world-class leadership in climate science and they want to make sure the same is done in technology. A better understanding of the potential risks of climate change is essential. A robust set of options is needed to deal with our long-term issue of energy supply but also stabilize emissions. An integrated understanding of both science and technology is needed to chart future courses and action. And lastly, a global approach is important.

After the three presentations, there were several questions from the audience. One participant, impressed with how the three officials worked in such a constrained environment, asked how can the scientific community be more helpful. Dr. Marburger suggested that the scientific community do what it does best. For example, we need to improve the climate models. He discussed how we still do not understand why there are huge differences between some of the climate models.

Another participant commented on the connection between science and policy and asked the panel what specific mechanisms they envisioned for enhancing the connection between basic research and its policy questions. Dr. Marburger noted that modeling and decision tools will allow us to try out different scenarios. But he commented that we do not have a sophisticated set of tools to answer the questions. We have some of that activity in the international community, but it does not get used very well. Dr. Mahoney pointed out that the CCSP workshop and comment process involved understanding which questions to ask to get information useful for public discussion and policy issues. The Administration is intensively involved in IPCC and there is plenty more we can do. He encouraged scientists to push back if the Administration is missing key points.

Other topics included international aspects, involvement of the private sector, overpopulation, signing of the Kyoto agreement, when to start implementing technological solutions, and how to interact with those at regional levels.

Overall, the Presidential Policy Forum emphasized how the Administration’s climate initiatives are of paramount importance not just to our field, but also to society generally. With the revision of the CCSP strategic plan, the newly formed and expanding CCTP, and the upcoming Earth Observation Summit, the Administration is steadily moving forward with its climate agenda. At the same time, both speakers and questioners made it clear that much more remains to be done.