



## Department of Energy

Washington, DC 20585  
June 26, 2007

Dr. Jill Dahlburg, Chair, ASCAC  
Naval Research Laboratory, Code 1001  
4555 Overlook Avenue  
Washington, DC 20375

Dr. Michelle Broido, Chair, BERAC  
Associate Vice Chancellor for Basic Biomedical Research,  
and Director, Office of Research, Health Sciences  
University of Pittsburgh  
Scaife Hall, Suite 401  
3550 Terrace Street  
Pittsburgh, PA 15261

Dear Drs. Dahlburg and Broido:

I am charging the Advanced Scientific Computing Advisory Committee (ASCAC) and the Biological and Environmental Research Advisory Committee (BERAC) to convene a joint panel to investigate barriers or bottlenecks to achieving successful outcomes of complementary investments specifically in climate modeling by ASCR and BER. The joint panel should identify the key computational and information technology obstacles to advancing climate change science and improving climate change projections using state-of-the-science coupled climate models.

Thus, the panel would need to examine computational, software, data management, networking, and collaboration technology requirements of the Climate Change Research Program (CCRP) in BER. The panel should take a comprehensive view and consider the needs of the climate change community with respect to computational, storage, and networking resources as provided by the ASCR Leadership Computing facilities at ORNL and ANL, SciDAC, by NERSC, and by ESnet. This comprehensive view also should include collaboration tools, efficient access to observation and climate data archives, and long term support for large scale software. Furthermore, the panel should examine how progress in the climate and Earth systems modeling component of the CCRP could be accelerated through targeted investments in applied mathematics, computer science, and computational climate science.

With regard to networking efforts, there are several activities which would be complementary to this charge. In July, there will be an ASCR-BER workshop on ESnet requirements. Also, there is an on-going ASCAC subcommittee on networking research chaired by Ellen Stechel.



In order to influence funding and computing allocations decisions in ASCR, I would like a full report on findings and recommendations by the November 2007 ASCAC meeting. I appreciate ASCAC's and BERAC's willingness to undertake this important activity.

Sincerely,

A handwritten signature in cursive script that reads "Ray Orbach".

Raymond L. Orbach  
Director  
Office of Science



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4555 Overlook Avenue  
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Dear Dr. Dahlburg:

I am charging the Advanced Scientific Computing Advisory Committee (ASCAC) to assess the strategic priorities of the Advanced Scientific Computing Research program, focusing on the balance between the "core" research efforts and high performance computing facilities and on the balance between more immediate research needs of current scientific applications and the long-term investments necessary to effectively utilize the high performance systems of the future.

The ASCR program is delivering leadership computing facilities and advanced networks critical to advancing scientific applications and Department of Energy missions. In that role, ASCR is an enabling partner to the other research programs of the Office of Science and, through INCITE, to American competitiveness. But ASCR also plays a critical role in advancing the underlying applied mathematics, computer science, and advanced network research necessary to effectively utilize the computing and network resources of the future. Because success is often built upon a decade or more of research effort, it is vital for ASCR to carefully balance investments in facilities and research and, within research, to balance the immediate needs of program partners with the long-term investments necessary for sustained progress.

In order to influence funding decisions in ASCR, I would like a full report on findings and recommendations of the ASCAC by the February 2008 meeting. I appreciate ASCAC's willingness to undertake this important activity.

Sincerely,

A handwritten signature in cursive script that reads "Ray Orbach".

Raymond L. Orbach  
Director  
Office of Science

