July 17, 2009

The Honorable Steven Chu
Secretary of Energy
U.S. Department of Energy
1000 Independence Ave. SW
Washington, D.C. 20585

Dear Secretary Chu:

On behalf of the Association of American Universities (AAU) and the Association of Public and Land-grant Universities (A·P·L·U), which together represent most major public and private U.S. research universities, we write to express our enthusiasm about the newly established Advanced Research Projects Agency for Energy (ARPA-E). This new agency within the Department of Energy (DOE) will provide university researchers with exciting new opportunities to engage in transformational research to address major energy challenges facing our nation and the world. AAU and A·P·L·U stand ready to support this organization in any way we can to ensure its success. To this end, we have submitted over 50 names of faculty and other researchers from our campuses who have stepped forward to serve as program officers and assistant program officers in the new ARPA-E.

It is in this spirit that we express our concern that the first ARPA-E solicitation contains a minimum 20 percent cost sharing requirement. We believe this is not in keeping with the intent of cost sharing rules contained in Section 988 of the Energy Policy Act of 2005 and will undermine the ability of ARPA-E to support truly transformative research. We assume that DOE based the inclusion of the ARPA-E cost sharing requirement on the general rule contained in section 988(b)(1) which is as follows:

(1) IN GENERAL- Except as provided in paragraphs (2) and (3) and subsection (f), the Secretary shall require not less than 20 percent of the cost of a research or development activity described in subsection (a) to be provided by a non-Federal source.

However, that general rule cites two exceptions that we believe should govern much of the university related research that will be conducted under ARPA-E:

(2) EXCLUSION- Paragraph (1) shall not apply to a research or development activity described in subsection (a) that is of a basic or fundamental nature, as determined by the appropriate officer of the Department.
(3) REDUCTION- The Secretary may reduce or eliminate the requirement of paragraph (1) for a research and development activity of an applied nature if the Secretary determines that the reduction is necessary and appropriate.

We believe that ARPA-E -- as envisioned by you and others who were involved in the National Academies Report, *Rising Above the Gathering Storm* -- must focus on research leading to transformative energy technologies that will revolutionize energy production and use in the United States and throughout the world.
This has certainly been the case with the Defense Advanced Research Projects Agency (DARPA), on which ARPA-E is modeled. That agency has produced breakthroughs with broad societal benefits such as the Internet, the World Wide Web, and global positioning systems. Indeed, ARPA-E has been tasked specifically with supporting high-risk, high-payoff research aimed at fostering “transformational energy-related technologies…that disrupt the status quo.” The first solicitation notes that: “…a technology is considered transformational when it so outperforms current approaches that it causes an industry to shift its technology base to the new technology.”

Such revolutionary technologies begin as radical ideas that are too far from the investment horizons of for-profit companies. The university role is to conduct the fundamental research that proves the concept sufficiently to interest companies in/with the possibility of products and profits. Almost by definition, an ARPA-E project during this early phase should qualify under the exclusion quoted above. Any untried concept with so little risk that a company is willing to invest in it from the beginning is unlikely to be truly transformative and is probably not bold enough to deserve ARPA-E funding.

There is a practical reason for a blanket exemption for ARPA-E projects. As you know, our universities are nonprofit institutions that have limited sources of funding to meet cost sharing requirements, e.g. endowments, state funds, tuition. Current economic conditions are forcing our institutions to make significant cutbacks, cancel hiring of new faculty and, in some instances, to lay off personnel. The ARPA-E cost sharing requirement will serve as a clear disincentive for distressed institutions to allow their faculty to submit full proposals to ARPA-E.

We believe that cost sharing for ARPA-E projects is not required by statute based not only on the exceptions allowed under Section 988, but also from the interpretation of Section 988 reflected in current DOE regulations. According to 10 CFR Part 600.30:

“When DOE awards financial assistance for research, development, and demonstration projects where the primary purpose of the project is the ultimate commercialization and utilization of technology by the private sector and when there are reasonable expectations that the recipient will receive significant present or future economic benefits beyond the instant award as a result of the performance of the project, cost sharing shall be required. Unless the cost sharing is required by statute, a waiver of the requirement on a single-case or class basis may be approved by the cognizant Program Assistant Secretary or designee.”

This definition clearly would not apply during the high-risk and transformation research phases of an ARPA-E project where, as described under Part 600.30, there is no “reasonable expectation that the recipient will receive significant present or future economic benefits … as a result of the project.” Thus, cost sharing should not be required.

Finally, we note that DARPA requires no cost sharing requirement similar to that included in the initial ARPA-E solicitation. In fact, we doubt that the revolutionary ideas that eventually led to major DARPA advances would have been possible with a 20 percent matching requirement in their early stages.
Again, we look forward to working with you to see that ARPA-E is successful at fulfilling its intended mission. To this end, we urge you to seriously reconsider the 20 percent cost sharing requirement.

Sincerely,

Robert M. Berdahl
President
Association of American Universities

Peter McPherson
President
Association of Public and Land-grant Universities

cc: John Holdren
Kristina Johnson
Steven Koonin
Steve Isakowitz