ASSOCIATION OF PUBLIC AND LAND-GRANT UNIVERSITIES

October 14, 2009

The Honorable Harry Reid
Majority Leader
United States Senate
Washington, D.C. 20510

Dear Majority Leader Reid:

On behalf of the Association of Public and Land-grant Universities (A·P·L·U) and the Association of American Universities (AAU), we write to offer comments from the research university perspective on H.R. 2454, "The American Clean Energy and Security Act" (ACES Act) and its counterpart now under development in a number of Senate committees.

The combined membership of A·P·L·U and AAU includes most major public and private research universities in the United States. Despite budget constraints brought on by state government cuts and declining endowments resulting from the current fiscal crisis, our universities are already seriously engaged in producing the intellectual talent, the scientific breakthroughs, and the new energy technologies required to help meet the huge energy and environmental challenges facing our country. We would like to work with the federal government to contribute more.

Unfortunately, our nation and the rest of the world have been woefully under-investing in energy research and development for almost three decades. Today our federal energy R&D expenditures are just one-fifth of their 1980 peak as a percentage of GDP. Indeed, since 1980 the U.S. federal investment in energy R&D has dropped from 10 percent of total government R&D investments to just two percent today. This underinvestment has left our current knowledge base and our available clean energy technologies inadequate to tackle the looming energy and climate challenges.

Achieving necessary new energy and environmental goals will require replacing virtually every energy technology used worldwide today at a cost that the International Energy Agency (IEA) has predicted will reach trillions of dollars. For us to have a reasonable chance of meeting these goals and avoiding significant environmental degradation, U.S. energy companies must become as research-oriented as high-tech companies are today. At the same time, the U.S. government must immediately increase its commitment to investing in long-term energy research critical to our energy future.

We were encouraged when the President said in his February 2009 address to Congress, referring to cap and trade revenues, that "we will invest $15 billion a year to develop technologies like wind power and solar power, advanced biofuels, clean coal, and more efficient cars and trucks built right here in America." We are further encouraged that Secretary of Energy Steven Chu has said repeatedly that to

meet the climate change challenge, government spending on energy R&D must move to the levels of high-tech industry, which are generally 10 percent or more of sales. Both realize that technological change must be preceded by the increased knowledge that can only come from a substantial research and development effort.

The only way for Secretary Chu's vision to move forward at a credible pace, however, is for the Congress to honor the President's request. Unfortunately, the House-passed bill failed to do this. As Presidential Science Advisor John Holdren noted in a September 24 National Journal interview, "...in my judgment, one of the things I would have preferred to see in the House bill that wasn't really there, was a lot of support for energy technology and innovation. In principle, that could be fixed in the Senate and in conference." This is a gentle way of saying that the House-passed bill managed to spread tens of billions of dollars per year on a wide variety of energy and environmental causes while virtually ignoring the research investment necessary to solve our energy and environmental problems; the draft Senate Environment and Public Works Committee bill also appears to ignore the Administration's call for R&D.

As the Senate moves forward with climate change legislation, we strongly urge you to ensure that the amount of R&D funding designated for the development of clean energy technologies is more in line with the President's proposal of $15 billion. We further encourage Congress to designate approximately a third of these funds to support early-stage basic, applied and transformational research and to expand energy education and workforce efforts. Finally, we recommend that Congress front-load this R&D investment in the climate legislation to ensure that we have the required research breakthroughs and new technologies available in time to successfully meet the bill's targets for greenhouse gas emission reductions.

We commend you for your leadership in advancing the innovation agenda in Congress. We view the passage of the America COMPETES Act and spending provided in both the FY 2009 appropriations bills and the American Reinvestment and Recovery Act as major steps in developing the research capabilities we must have in the near future. We are grateful for the continued incremental increases in appropriations for basic research that reflect the goals of the America COMPETES Act and the President's budget. These increases on their own will bring us only a fraction of the way to solving our energy research deficiencies. We agree with the President that a directed revenue stream from climate change mitigation legislation is the best way to address this problem.

A one-page fact sheet with more information on our proposal is attached.

Sincerely,

Peter McPherson
Association of Public and Land-grant Universities

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