

Mesa View



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National Labs and Universities: Proven Synergy

Institutions that resemble national laboratories actually come in two flavors: Some, like the Naval Research Laboratory or NASA's Goddard Space Flight Center, are directly managed by the Federal government. Others, like Los Alamos and Lawrence Livermore National Laboratories, operated for the Department of Energy and the National Nuclear Security Administration, or the Department of Defense's Lincoln Laboratory, are managed on behalf of the Federal government by non-Federal entities—predominantly by universities. These latter labs are called FFRDCs, Federally Funded Research and Development Centers. Los Alamos is in fact an FFRDC.

In 2000 (the latest available figures), about \$265 billion was spent on R&D activities in the United States. This total divides into about \$85 billion funded for public purposes (i.e., by government, nonprofits, and universities) and \$180 billion funded by the private sector (i.e., by industry). Defense-related R&D here counts as public, even if it is performed by industry.

We can break down the \$85 billion of public R&D according to the kind of institution doing the work: \$30 billion to universities plus \$5 billion to other nonprofits, \$20 billion to industry, \$20 billion executed within the Federal government (including the directly managed laboratories), and \$10 billion to FFRDCs.

Universities deserve, and get, the largest share of public R&D, because they are the primary engine of science and technology creativity in our country. The world is envious of our system of great research universities and the diversity of talent that they house. But, historically and now, our nation turns to its FFRDCs when it needs the sharpest-possible cutting edge on mission-related R&D, both for directed research and for vital parts of the underlying basic science.

It is no coincidence that most of the \$10 billion for FFRDCs goes to ones that are managed by research universities or that the largest part of this funding goes to the University of California's laboratories, including Los Alamos. In creating this direct interface between its greatest universities and its greatest national laboratories, our nation found a synergy that multiplies the effectiveness of both kinds of institutions in solving its most important national problems.

In 2005, the contract to manage Los Alamos will be competed for the first time in sixty years. Understandably, few of us here on the mesa favored the decision to compete. For some, there is a tendency to assume the worst, that the competition outcome will be determined by low politics, not high principles.

I don't accept this negativism. I know from personal interaction that DOE's and NNSA's top leaders understand and value what is unique about Los Alamos and that they understand the critical role played by a great university's management. Personally, I don't think they will find any university better than the University of California at filling this essential role—not even close. Let's compete!