



SECRETARY OF ENERGY ADVISORY BOARD MEETING

December 10, 2003

SEAB Task Force on the Future of Science Programs at the Department of Energy “Critical Choices: Science, Energy, and Security”

Comments from ASTRA, the Alliance for Science & Technology Research in America

Mr. Secretary, Chairman McPherson, and President Vest:

I'm here on behalf of ASTRA, the Alliance for Science and Technology Research in America, whose members include many of the nation's top high-technology companies, universities, research institutions, associations and professional societies.

I am pleased to have this opportunity today to present ASTRA's comments on the SEAB Task Force on the Future of Science Programs at the Department of Energy and to provide ASTRA's endorsement of their report. ASTRA has carefully reviewed the report and sincerely thanks the Task Force for a constructive, well thought out document.

As the report reminds us, the Department of Energy's missions are devoted to national security, vital components of which must include economic strength and secure, sustainable, clean and affordable sources of energy. The report also highlights what an important role the DOE science programs play for the Department's other three missions, the country's economic health, its energy security and its national security.

ASTRA shares the Task Force's deep concern for the decades of stagnant federal investment in the physical sciences and engineering, and the resulting decay and deferred maintenance at the national laboratories, frequently called the nation's gems. DOE's R&D budget actually dropped in the period 1990 to 2004, while the R&D budgets of five other federal agencies increased (in constant dollars).

Yet, ASTRA has tremendous optimism for DOE science under the outstanding leadership of Secretary Abraham. It was Secretary Abraham who asked SEAB for a report on DOE's science. Furthermore, he has tirelessly advocated for the DOE science programs, announcing the 20-year facility plan in a speech to the National Press Club in November, testifying for the Office of Science before a Senate Energy and Natural Resources subcommittee in July, and narrating an outstanding video about the Office of Science.

In addition to the Administration's forward-looking 20-year DOE facility plan, President Bush is making a push for energy independence, calling for a hydrogen economy, in addition to the 20-year facility plan's top seed: ITER. In order for the President's programs to succeed, profound scientific discoveries are needed. Without the necessary federal investments in research, twenty years from now, the United States could be importing hydrogen from Japan instead of oil from the Middle East.

Just as our country needs new science to achieve its goals, it also needs new scientists and engineers. The stagnation for funding in the physical sciences and engineering has resulted in fewer and fewer Americans obtaining undergraduate degrees and graduate degrees in these same fields. Furthermore, the percentage of foreign students in U.S. graduate programs in engineering and science are at record levels. All of this occurs at a time of undeniable growing S&T infrastructures throughout the world. Energy independence will be meaningless if we are importing our S&T workforce and our ideas from abroad; or worse, if we are importing our energy independence technology from abroad.

In recognition of these realities, this task force has made many insightful and constructive recommendations. While ASTRA agrees and endorses all, we highlight two. Strengthening "the federal investment in the physical sciences and advanced engineering research" is essential for the reasons stated above. As the largest funder of the physical sciences, as well as the mathematical and computer sciences, and a key funder of engineering, DOE must take the initiative on this recommendation. An Under Secretary for Science is also essential, not only for securing the necessary funding for the DOE civilian research programs, but to provide leadership dedicated to DOE's science mission. An undersecretary for science would help to revive U.S. leadership in engineering and the sciences, provide the necessary R&D support of the other three DOE missions, assure an adequate supply of American scientists and engineers, and provide the guidance to achieving the necessary advances for energy independence.

Mr. Secretary, ASTRA urges you to adopt the recommendations of this Task Force and offers its assistance. The first step will be to provide the funding in FY05 for a robust start of the Administration's 20-year facility plan and ASTRA stands at your side to help. Thank you.