

WASHINGTON NEWS

DOE Plans to Modernize Oak Ridge

The U.S. Department of Energy has announced a five-year, \$201 million plan to modernize its facilities at the Oak Ridge National Laboratory (ORNL) in Tennessee. The plan includes construction of 11 new facilities and the renovation of several existing buildings at the laboratory.

The plan, which was announced by DOE Secretary William Richardson in September, will include a \$26 million contribution from the State of Tennessee, and up to \$50 million in private funding. DOE will cover the remaining \$125 million.

The ORNL modernization was first proposed by UT-Battelle, the new management contractor for the laboratory, a partnership between the University of Tennessee and Battelle Memorial Institute of Columbus, Ohio. Battelle has served as the management contractor at Pacific Northwest National Laboratory (PNNL) in Richland, Washington, since that laboratory began its own five-year modernization effort in 1993. Last April 1, UT-Battelle succeeded Lockheed Martin Energy Resources, the previous ORNL manager.

According to Jeff Smith, deputy director of operations for UT-Battelle, the modernization has been under study since October 1998, when the organization first began to consider competing for the ORNL management contract. That effort led to a formal proposal to DOE in July 1999 and awarding of the contract at the end of last year. UT-Battelle officially took over management in April 2000, and spent the next six months formulating the modernization plan.

"Once we finally took over, we immediately saw that significant modernization would be required," Smith said. "For example, the main chemical lab, a 600,000-square-foot building, still had fifties' vintage plumbing and electrical systems. So did the cafeteria and library." Much of DOE's share of the new funding will go toward renovating those and other basic facilities.

Winning DOE's approval of the proposal proved a double challenge for UT-Battelle, Smith said. On the one hand, the work was badly needed. On the other hand, no money in the DOE budget was earmarked for such expenditures. Therefore, UT-Battelle would have to persuade DOE not only to fund the modernization, but also to do so not at the expense of scientific programs. Instead, DOE would have to create a new line item for that effort in its Fiscal Year 2001 budget request. The new funding item would be crucial, Smith said, because

otherwise it would force the modernization effort to compete with other DOE science programs for funding and no doubt would generate opposition from other program managers.

At the same time, Smith said, UT-Battelle recognized that DOE could not foot the entire bill. That is why they approached the State of Tennessee, as well as several private companies and organizations.

As a result, Tennessee agreed to contribute \$26 million to fund four new institutes, including \$8 million for a Joint Institute for Neutron Sciences, to be affiliated with DOE's Spallation Neutron Source, the six-year, \$1.4 billion project now under construction at Oak Ridge. Another \$4 million will go for a Center for Advanced Studies; \$6 million for computational sciences; and \$8 million for a biosciences institute, which will be affiliated with DOE's new mouse-genomics facilities—nicknamed the "Mouse House."

Battelle itself has agreed to provide financial backing for three more of the new facilities: an energy-technology building, a computer-sciences building affiliated with a DOE-funded computer-sciences center, and a mixed-use office building.

One key ingredient in securing state and private funding involves the long-term transfer of federally owned land on the present ORNL site. This is necessary, according to Smith, to provide the outside parties with a guarantee that they can recover at least part of their investments. This is the first time such a partnership has been attempted among DOE, a state government, and the private sector. It may be used as a model for modernization efforts at the other national laboratories.

Smith said that although UT-Battelle has already been approached informally by "lots of organizations" regarding the \$50 million in private funding, more details need to be worked out with DOE before any contracts can be signed.

According to William Madia, ORNL's director, "In a highly competitive research community, it takes world-class facilities to attract world-class scientists. This modernization plan represents the largest construction effort on the ORNL site since the Manhattan Project in 1943." Madia predicted that the plan will reduce ORNL's operating costs, improve safety, and reduce energy consumption. When construction and renovation are completed in 2006, the laboratory will have "replaced 1.8 million square feet of expensive and outdated space with about 600,000 square feet of modern, energy-efficient buildings."

PHIL BERARDELLI

Dresselhaus Sworn in as Director of DOE's Office of Science



Mildred S. Dresselhaus was sworn in on August 7 as Director of the Department of Energy's Office of Science. Secretary of Energy William Richardson said, "Dr. Dresselhaus

brings to the task more than 40 years of research experience as an eminent physicist. Equally important is her long service to the scientific community, including the leadership of major scientific associations. Her advice to the government on science policy has always been sage, and I look forward to her continued contributions."

Dresselhaus will manage an office that, with an annual budget of \$2.8 billion, is one of the largest sponsors of basic research in the federal government. The office funds programs in basic energy sciences, high-energy and nuclear physics, biological and environmental research, fusion-energy sciences, advanced scientific computing, and science education. The Office plans, constructs, and operates major scientific user facilities used by over 15,000 researchers from universities, national laboratories, and industrial laboratories. It also sponsors projects at scientific institutions across the United States, including investments in graduate education, to ensure the next generation of highly capable scientists and engineers.

As the department's science and technology advisor, Dresselhaus will advise the Secretary on science and technology issues that cut across the department's programs. She also will be responsible for the management of five of the department's multiprogram laboratories and five single-program laboratories.

While at DOE, Dresselhaus is on leave of absence from her position as Institute Professor of Electrical Engineering and Physics at the Massachusetts Institute of Technology. Dresselhaus has received numerous awards, including the National Medal of Science, 17 honorary doctorates, and, most recently, the Weizmann Women & Science Millennium Lifetime Achievement Award. She received her PhD degree in physics in 1958 from the University of Chicago. □