Small Labs Make Big Targets

The Department of Energy's (DOE's) nine multipurpose labs may get most of the attention (see main text), but it's the 17 smaller, more focused, and less well-known labs that are more likely to get swamped by the changes washing over the department. "In a smaller organization, you don't have as many pockets to take 10% away from," says Philip Krey, director of the Environmental Measurements Laboratory (EML) in New York City, which researches quality-assurance and environmental issues.

The EML's $8 million budget is 23% smaller than last year's, a cut that Krey says was hard to handle. "We were struggling to make sure that we were able to maintain our commitment to our customers and still not run out of money to pay our salaries," he adds. The lab, founded in 1947 to analyze nuclear fallout, now conducts environmental research on pollutants from power production.

MICHAEL BARLEY/ITRI

Hanging by a thread. ITRI hopes industry will take over its work on cancer-causing fibers.

The EML's fight for survival is typical of life these days at the smaller labs. The DOE has begun privatizing two, is closing at least one more, and is laying plans to consolidate and close others. Nearly all suffer from shrinking budgets. The National Renewable Energy Laboratory in Golden, Colorado, for example, will receive about $170 million from the DOE this year, down from $237 million in 1995. And the $280 million budget for Knolls Atomic Power Laboratory in Schenectady, New York, which performs classified naval research, is 30% lower than in 1992. One lab director who requested anonymity told *Science* that his facility will almost certainly close if it takes another cut in federal funding like the 15% cut it sustained this year. Other lab managers report that some of their workers have decided to flee the uncertainty by retiring early or taking another job.

DOE divides these labs into two categories. The first is the eight single-purpose facilities with specific missions, including two naval research labs. Their combined budget and size this year—$821 million and a staff of about 7900—is smaller than the $1.4 billion budget and 8494 staff at Sandia National Laboratories alone. There are also nine program-dedicated laboratories with a combined annual budget of $1.8 billion and 7930 staff. Those labs tend to be larger and typically have a facility used by researchers around the country and the world, such as Fermi National Accelerator Laboratory in Batavia, Illinois.

In the push for budget savings, the single-purpose labs are the favored targets. "The single-purpose labs are clearly candidates for consolidation and outright closure," Deputy Secretary Charles Curtis told *Science*. "They are the first-order candidates for examination, though this has to be done very carefully." The Laboratory Operations Board, composed of DOE officials and outside advisers, will soon begin to review what steps to take, and how quickly to take them.

But changes are already under way. Last year the department slashed funding for its Laboratory of Radiobiology and Environmental Health on the campus of the University of California, San Francisco, and now intends to close it. Officials at the Inhalation Toxicology Research Institute in Albuquerque, New Mexico, have asked DOE to privatize ITRI, created in 1960 to research inhaled particles from nuclear weapons and diesel fuels. The DOE's primary interests in health research have shifted to the Human Genome Project and structural biology, and ITRI officials "realized they were going to lose their core competencies and their core people," says DOE spokesperson Joe Rudolph. "It was a matter of survival." The DOE will phase out its lab funding over several years. The private Lovelace Biomedical and Environmental Research Institute in Albuquerque, which currently runs the lab, will pick up a larger share of the tab.

The DOE is also privatizing the National Institute of Petroleum and Energy Research in Bartlesville, Oklahoma, and moving its project office there to Golden. The 25-staff-member field office oversees DOE's national oil program. And if DOE gets its way, one office will oversee work done by Pittsburgh Energy Technology Center and Morgantown Energy Technology Center, both of which are operated by DOE.

But even though the labs are not behemoths, they can still attract the attention of powerful politicians intent on retaining a slice of the federal pie for their constituents. When Congress got wind last month of the proposal for combined oversight of the Morgantown and Pittsburgh centers, Senators Robert Byrd (D–WV) and Slade Gorton (R–WA), whose state is home to two large DOE facilities, sent DOE Secretary Hazel O'Leary a letter ordering the department not to take any action without their approval. "Closing offices is very, very difficult," Curtis admits. "We'll have to fight."

–Kim Peterson

electric bill, for example, tops $700,000, says its director, David Moncton. Cash-strapped Argonne is struggling to run the facility full-time, but Moncton says he may be forced to lay off staff and stop buying spare parts unless he finds additional funding. "There could be dead bodies all over the place," he warns. DOE and White House officials worry that scientific productivity will plummet if the labs curb use of the facilities or cut technical staff and research programs to save money.

But lab managers also see big machines as a way to attract paying customers. So far the payoff is small, but some say it reflects a more open and entrepreneurial spirit that will survive any slowdown of cooperative industry agreements. Some labs, for example, will grant employees extended leave to pursue business ventures based on lab research. "It used to be the labs were a bastion of inertia," says Gilman. "Now they are out in the real world, making deals."

None of these evolutionary changes were enough, however, to stave off the lab-closing commission in the role-playing game. "The laboratories will not survive if they cannot demonstrate to the American taxpayers and Congress some societal value," says Schriesheim. Nor should they, say some politicians. But the intertwined interests of the DOE bureaucracy, the lab operators, and Congress make radical shifts unlikely. "You're going to see improvements rather than reform between 1996 and 2000," says Richter. For Galvin, that cautious path makes even the best labs vulnerable and threatens to diminish the nation's capacity to do basic research. "And that," he says glumly, "would be a great tragedy."

–Andrew Lawler