SCIENCESCOPE

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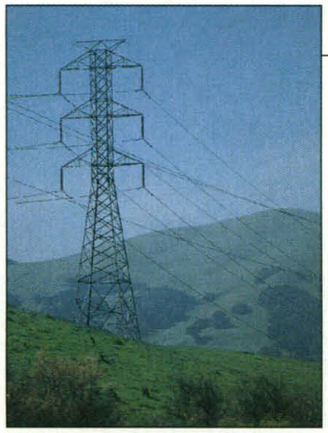

Powering down. DOE is ending its studies of EMF health effects.

DOE Gets Out of EMF Research

The Department of Energy is pulling out of research on the health risks of electromagnetic fields (EMFs) after next year, and it's not clear to what extent other federal agencies will be taking up the slack. DOE's decision follows a report last fall by the National Academy of Sciences (NAS) that found "no conclusive ... evidence" of adverse health effects from residential EMFs.

DOE now runs two scientific programs. One, called Research and Public Information and Dissemination Program (RAPID), is a $45 million effort with the National Institute of Environmental Health Sciences (NIEHS) involving lab studies. Congress gave the program a 5-year lifetime when it was created in 1992, so its demise comes as no surprise.

But DOE's decision, announced in a 7 March letter to NIEHS, would also end a $4-million-a-year program on EMF biological mechanisms that has run for 20 years. DOE officials say it would be up to NIEHS to continue the work; NIEHS, in turn, says it expects to learn from RAPID what future priorities it should set for EMF research (although it already funds some EMF work through extramural grants).

Not surprisingly, some EMF researchers are unhappy with DOE's plans. "There's still reason to look at the hazards, in my opinion," says Richard Luben, a biochemist at the University of California, Riverside, who points out that the NAS report recommended further studies. But Keith Florig, a science policy expert at Carnegie Mellon, notes that research on EMF risks "hasn't been very productive ... science isn't really up to the task of answering the question."

High NIF Cost Burns Lawmaker

A $100 million jump in the cost of the National Ignition Facility (NIF), which will use lasers to simulate nuclear weapons explosions and study fusion, is troubling supporters of the $1.2 billion project. "Overruns have legs around here," warned Senator Peter Domenici (R–NM), who chairs the panel that oversees funding for NIF's sponsor, the Department of Energy (DOE), at a hearing last week. When it comes to building big projects on time and on budget, he said, DOE's record "is pretty abysmal."

NIF's managers at Lawrence Livermore National Lab say half the increase stems from a decision to finish construction a year later, in 2003. The rest, they say, is due to relatively minor technical modifications made at the request of researchers—for example, to allow more frequent laser shots.

The overall cost of the project is an issue now because the White House has asked Congress to put up all construction money this year. That's also the best way to keep a financial lid on the project, argued Vic Reis, DOE defense programs chief, at the hearing.

Academy to Study ITER

Amid controversy over whether the International Thermonuclear Experimental Reactor (ITER) can achieve a fusion burn (*Science*, 6 December 1996, p. 1600), the Department of Energy (DOE) has asked the National Academy of Sciences to conduct a broad review of the $10 billion project. The study would cover not only ITER's chances of achieving its scientific objectives, but also whether U.S. participation would benefit the fusion community and what new knowledge could result. DOE has asked for answers by December in time to help the United States decide whether to proceed.

Milton Johnson, DOE's new deputy fusion chief, says the department wants an analysis that is "totally independent" of the fusion community and that it "has nothing to do with" questions about ITER's design.

Reports Warn of R&D Cuts

When Congress returns from its spring recess on 8 April to tackle the 1998 federal budget, it will get an earful of advice on how to improve it from groups that have already found the president's version wanting.

In a bipartisan call, the House Science Committee wants to triple the 1% increase proposed by President Clinton for research under the panel's purview—that is, most civilian R&D minus biomedical research. "Basically, we want to cover inflation," a staffer says. The plan would add money to environmental science, and make small cuts in research at the Department of Energy. But the 20 March document calls for less radical changes than previous Republican proposals.

Beyond the Capitol, the National Academy of Sciences (NAS) and the American Association for the Advancement of Science (AAAS, which publishes *Science*) issued analyses on 24 March that paint a gloomy picture for R&D under the president's request. Only the National Institutes of Health and the National Science Foundation have more money for R&D next year than in 1994 if inflation is taken into account, the NAS study says. And the 1998 request for science is effectively 3.4% less than what was available in 1994. Both reports note that much of this year's proposed increase goes for construction projects, not research.

The AAAS analysis finds that White House projections for 2002 would slice the purchasing power of R&D budgets by 14%. Civilian R&D would fall by 9.4%, while defense R&D would drop 17.8%. "Things aren't getting better—they're just projected to decline more slowly," says AAAS policy chief Al Teich. One White House official is unimpressed. "If inflation is the only thing attacking the science budget," he says, "they should take the money and run."

Jump Start for Russian R&D Businesses

The Russian government is about to launch two programs aimed at feeding the flames of an already-hot cottage industry: science-based businesses.

While Russia has had a hard time reforming its network of bloated scientific institutes, researchers have embraced capitalism by forming small businesses that are trying to sell everything from new drugs to spark plugs. The government estimates that 70,000 science-based companies, employing about 360,000 people, have sprung up in the past decade. Most occupy space in moribund institutes. "In some cases, these enterprises are doing more R&D than the mother organizations," says former Science Minister Boris Saltykov.

Hoping to bet on a winner, the government plans to pour at least $15 million into two efforts to shore up existing science firms and spur new ones. The programs, run by the science ministry and a new entity called the Federal Fund for Industrial Innovation, will disburse short-term loans and seed grants in such areas as biotech and ecological monitoring.

The funds will augment $30 million budgeted this year by Russia's Fund for Assistance to Small Innovative Enterprises (FASIE), which makes loans to high-tech firms. Says FASIE director Ivan Bortnik, "Russian science is evolving into smaller units."