

The SSC Gets Its (Official) Price Tag: \$8.3 Billion

The Department of Energy picks an estimate at the low end of the range; Congress will now examine its assumptions

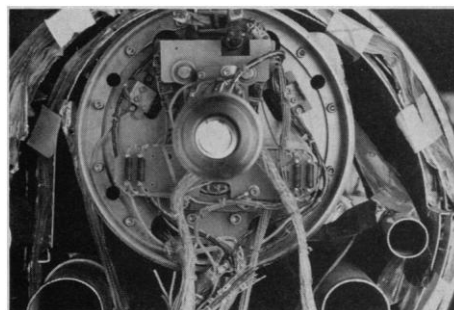
AFTER MORE THAN 5 YEARS OF ESTIMATION, design, redesign, and review, the Department of Energy has officially determined* that it can build the Superconducting Super Collider (SSC) by 1999 for \$8.249 billion. That's \$2.35 billion more than DOE was estimating a year ago, before it added on the costs of changing some elements in the design. Even so, the new figure still falls at the low end of four separate estimates commissioned by DOE, which ranged from \$7.8 billion to \$11.8 billion (*Science*, 17 August 1990, p. 731).

This new estimate will now get a thorough review by Congress, which is being asked to come up with \$534 million for the project in fiscal year 1992, more than double this year's budget. Congress is expected to zero in on several of DOE's assumptions. For instance, included in the plan is nearly \$1.6 billion in foreign support, although foreign contributions so far have been minuscule. DOE is also counting on Congress to agree to aggressive annual increases in federal outlays (see chart). Finally, some critics have raised questions over how DOE defines the "total cost" of the project—in particular, why it dismissed the \$11.8 billion estimate prepared by its Independent Cost Estimating (ICE) group, a review team consisting of two employees from DOE's Office of Independent Cost Estimating and eleven outside technical experts.

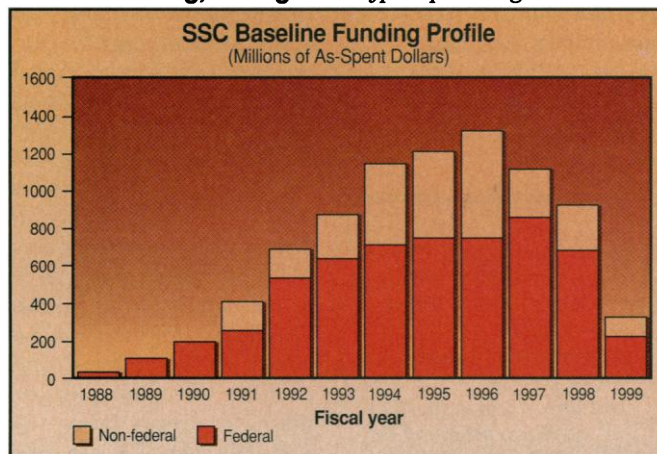
Deputy Energy Secretary W. Henson Moore tried to preempt these concerns when he revealed the new estimate on 5 February. Not only does DOE expect to get \$1.6 billion from international partners, he said, it's looking for even more: "If all our potential partners come in with what we think they can [contribute], we'd be in [the] position of spending less than \$5 billion [in federal funds]." The hoped-for contributors now include Japan, the Soviet Union, India, Canada, and six unspecified countries in Western Europe. So far, only India has promised to pony up, offering a

total of \$50 million. Moore said not to worry about the slow start; it takes at least a year or two to complete such agreements, and formal negotiations have only been going on since last summer.

Moore extended this optimism to Capitol Hill, where he expects to receive a "favorable" reaction. "If we don't get the funding from Congress," he warned, "the cost will go up, and the schedule will get stretched out." Here, however, DOE is more likely to run into trouble thanks to last year's budget agreement, which limits increases in discre-



Testing, testing. Prototype dipole magnet.



Climbing, climbing. The big jump in federal funds would come in 1992.

tionary domestic spending to the rate of inflation. DOE's budget for basic science—of which the SSC is an increasingly large fraction—is likely to get squeezed between a costly environmental cleanup at DOE's nuclear weapons facilities and the domestic spending cap. Moore pledged that the SSC won't "jeopardize other programs the department deems important for the future of

the country." But what if basic science did start hurting? Moore said he would ask Congress to lift DOE's spending cap—a tactic that's extremely unlikely to work, according to congressional observers.

Finally, some observers have accused DOE of understating the total cost of the project by using accounting tricks to move certain expenditures "off-budget." Such maneuvers make up the bulk of the difference between the official DOE numbers and the ICE estimate. Take, for instance, the cost estimates for two large, general-purpose detectors to be built by international teams of high-energy physicists. In calculating the total program cost for the SSC, DOE includes \$910 million in federal support for these collaborative efforts, but leaves the contributions expected from foreign partners out of its calculations entirely. The ICE estimate, however, includes the full cost of the detectors, regardless of the funding source, as well as a 40% contingency allowance—yielding an additional \$1.1 billion in detector costs. Similar disagreements account for most of the other \$2.45 billion in disputed costs.

Skepticism about the official estimate has been fueled also by the secrecy with which DOE has treated the ICE report. Although ICE completed its work last September, DOE refused until last week even to confirm the group's final estimate. And the tension appears to have taken a toll on the estimators' nerves. Bobby Scarlett, director of DOE's ICE office, refused last week to discuss his team's report. "I'm not talking to any reporters about costs," he said, hanging up abruptly when asked for his reasons.

Moore shrugged off the implications of the ICE estimate: "They included a number of items that we didn't think should have been included in the program cost, and the other estimating groups agreed." Furthermore, he said, DOE was reassured by the fact that its Office of Energy Research and a subpanel of the High Energy Physics Advisory Panel came in with estimates of \$8.3 billion and \$8.9 billion respectively, while University Research Associates—which is supervising the project—estimated \$7.8 billion.

For now, however, DOE's most pressing need is to get Congress on board for the next round of funding increases. Although careful to note that it was "too early to tell" how DOE's request will fare on the Hill, one aide to the Senate Appropriations Committee remarked that obtaining \$534 million for a single project will be "a daunting challenge."

■ DAVID P. HAMILTON

*Report on the Superconducting Super Collider Cost and Schedule Baseline, U.S. Department of Energy, DOE/ER-0468P, January 1991.