House Votes Florida State a Supercomputer

Support from the chairman of the science and technology committee, whose district includes the university, played a key role

On 22 May, the House of Representatives passed a budget bill for the Department of Energy (DOE) containing a little-noticed item that is likely to cause a big stir: a $7-million appropriation for a supercomputer center at Florida State University. The department had not requested the money, but it appeared in the bill largely because Florida State is located in the district of Representative Don Fuqua (D–Fla.), the chairman of the House Committee on Science and Technology.

Florida State sent a proposal for the center in to DOE late last summer. Fuqua, whose committee oversees many of DOE's research and development programs, supported it and the project quickly moved on to a fast political track. After discussions with DOE, which according to one official went as high as Energy secretary Donald Hodel, the science and technology committee in mid-April approved $3 million for start-up funds. In mid-May, the House Appropriations Committee, largely at the urging of Fuqua, increased the funds to $7 million. A week later, the appropriations bill sailed through the House.

If the measure makes it all the way through Congress—the Senate has yet to act—Florida State would be the first university to get a federally funded supercomputer. But the government's financial commitment would not end there. According to Robert Johnson, dean of graduate studies and research at the university, the center is expected to cost about $55 million over 5 years, and DOE's share will probably amount to between 60 and 65 percent.

All this sounds like a replay of the pork barrel politics that led to the funding of some university research facilities last year (see box below). But the major difference is that last year's budget raids came in amendments on the House floor that undermined the authority of Fuqua's committee, and Fuqua subsequently took the lead in discouraging repeat performances. This year, however, he appears to have pushed through a deal of his own.

This could prove politically damaging. Last year's activities drew a loud chorus of condemnation from just about every scientific and academic organization on the national scene. Now Fuqua, who is held in high regard by the scientific establishment for his work as committee chairman, "has been put in the position of being no better than the guys who went for [pork barrel projects] last year," says one observer. "Florida State is fooling with the reputation of a very good guy," he adds.

Neither Florida State nor Fuqua's committee staff see it that way, however. (Fuqua himself could not be reached for comment.) They argue that the project is highly worthy and that this somewhat unusual way of providing funds is the only way to cut through a thicket of federal regulations and speed things along. They point out that there is a growing need for university researchers to have access to supercomputers and argue that the Florida State proposal is a step in the right direction.

The proposal entails an expansion of Florida State's already substantial computing capabilities to form a new research center, the Super-Computational Research Institute. The heart of the facility would be a so-called class VII supercomputer currently under development by ETA Systems, a subsidiary of Control Data. The institute would be a resource for other Florida institutions and some out-of-state universities, and one of its major activities would be to develop the software for scientific research on supercomputers. The proposal also included provision of supercomputer services to DOE.

The department was reluctant to support the proposal for two reasons unrelated to its technical merits, however. The first was that the institute would potentially compete with private industry in the provision of supercomputer services, and federal law forbids the use of public funds to subsidize such competition. The second was that DOE, along with the National Science Foundation and the Department of Defense, have been trying to work out a program to make supercomputers available to academic researchers; establishing a center at Florida State may not fit in with the overall plan.

Nevertheless, because of Fuqua's interest in the project, top DOE officials "worked to the breaking point to devise arguments which could make this happen," says one department official who asked to remain anonymous. They advised Fuqua's staff that most of the legal problems would be avoided if Congress directed DOE to fund the project, and they agreed that it should be tied to the department's proposal to establish an electron accelerator in Newport News, Virginia. The accelerator will be operated by the Southeastern Universities Research Association (SURA), of which Florida State is a part, and it will require supercomputing capabilities.

Thus, on 12 April, Fuqua's committee

More for Catholic, Columbia

Catholic and Columbia Universities, which last year received funds for research facilities through amendments offered on the floor of the House of Representatives, are well on the way to securing a second installment from Congress. The appropriations bill for the Department of Energy (DOE), approved by the House on 22 May, contains $9.2 million to complete Catholic's Vitreous State Laboratory and $3 million to continue the National Center for Chemical Research at Columbia. Both received $5 million last year. DOE had requested no funds for the facilities in fiscal year 1985 because proposals for the projects were not completed by the time the department's budget was prepared. The House Appropriations Committee put in the funds anyway, and nobody objected when the bill went through the House. The furor surrounding these two projects last year (*Science*, 3 June 1983, p. 1024) led many research and education groups to protest the use of pork barrel politics in decisions on science funding.—**C.N.**

approved a bill directing DOE to establish "a state-of-the-art computer facility at a SURA university, with network access to the University of Virginia, the [electron accelerator] site, and other involved SURA universities." The committee report said that "the existing proposal to the Department from a SURA university to establish such a center would serve as the basis for this activity." The committee approved $3 million for the center, two-thirds of which would come from DOE's nuclear physics program, and one-third from its applied mathematics program.

The Appropriations Committee went one better by adding $7 million to DOE's budget for the center and specifying Florida State as the recipient. According to House sources, Fuqua was instrumental in getting committee approval. The House passed the bill without any discussion of the matter. Thus, Florida State is well on the way to establishing a computing facility ostensibly to support an accelerator that has not yet been approved by Congress.

Although final congressional approval will depend on Senate action, the project already has substantial political and financial support. According to dean Johnson, both houses of the Florida legislature have approved ten senior faculty positions for the center, Control Data has agreed to provide substantial support in terms of money and personnel, all major Florida universities will participate in the venture, and agreements are being worked out with some out-of-state universities in addition to SURA institutions.

Asked whether Florida State is simply jumping the gun on a broader federal program, Johnson said the center is "a natural progression of our present computing power . . . supercomputing needs to be brought to the universities." Johnson pointed out that four other universities—Colorado State, Purdue, the University of Minnesota, and the University of Georgia—have already acquired or are in the process of acquiring supercomputers with nongovernment funds. "Maybe the federal government is lagging," he said.

The Energy Department is currently expanding the supercomputer network that supports the fusion program, adding 1000 to 1500 new users in universities and federal labs, according to James Decker, who heads the program. The National Science Foundation is about to announce three contracts to enable university researchers to buy time on supercomputers at existing centers, and it plans eventually to establish a national network primarily for academic research. It will send out solicitations for proposals next month to establish between five and ten new supercomputer centers to form the basis of this national network. Florida State may get there first, however—and without going through the laborious and time-consuming business of entering a competition.

—COLIN NORMAN

Georgetown Seeks $160 Million

In a move that is startling for its boldness, Georgetown University in Washington, D.C., is seeking up to $160 million from the Department of the Army for a fuel cell demonstration program. By appealing directly to Congress, the university secured an $820,000 planning grant this year, which the Army has funded by cutting four existing research projects. Georgetown is now lobbying hard for $9 million in fiscal year 1985 for engineering studies.

Georgetown's tactics are raising concerns among scientific and education groups. If the university's lobbying is successful, they worry that the Army will be forced to reprogram more funds from approved projects—including some university programs. "It is bad science policy," says Robert Rosenzweig, president of the Association of American Universities, which is working to head off Georgetown's moves.

The plan is to build fuel cell cogeneration units at four sites—Army bases in Pennsylvania, Alaska, and Texas, and the Georgetown campus. The units would be a combination of coal gasifiers and fuel cells providing both electricity and thermal energy. The idea is to provide a commercial demonstration of the technology.

According to Dean Price, a Georgetown official who put the proposal together, the university has long had plans to build a coal gasifier to provide energy on its campus. Georgetown saw a way to fund the facility when it learned from a retired Army officer that the Army was seeking a way to reduce fuel costs on its bases. The university put together a scheme in conjunction with EBASCO, a major engineering consultancy, to build some demonstration units for the Army.

According to documents provided by the university to the House Appropriations Committee, the plan calls for the Army to spend up to $160 million on the project over 5 years, with private sources contributing another $60 million. The Army's outlays would rise from $9 million in 1985 to $45 million in 1988.

The intent is to demonstrate the technology with Army funds, with the expectation that private investment will be attracted into the venture when the technology is demonstrated. If the goals are met, the Army may be able to get power plants built at several other installations by private investors, who would recoup their capital costs by selling power.

Georgetown, which is said to enjoy excellent connections on Capitol Hill, floated the idea to Congress and the Army, and both the House and Senate Appropriations committees approved $820,000 for a feasibility study. The Army is funding it by cutting four existing programs—research in soil and rock mechanics, research in snow, ice, and frozen ground, research in scientific problems with military applications, and combat support research. The contract for the study is still being negotiated, but Georgetown officials have been back to Congress asking for $9 million for next year. The Army had not requested the funds.

"This is a legitimate program, thoroughly reviewed by all parties," says Price. However, the award of the planning grant required the Department of Energy (DOE) to be involved in overseeing the project; DOE officials say they have not yet seen any detailed proposals.

The proposal does, however, enjoy support from groups promoting fuel cell technology. For example, Jeffrey Serfess, executive director of the Fuel Cell Users Group, says his organization has sent letters to Congress supporting the venture. "We are very hopeful that it goes forward," he said.—**C.N.**