
Military-Industry Plan Boosts Science Education

The Pentagon is providing the initiative for a program designed to promote interest in science and engineering among high school and college students. A cooperative effort between the military and industry, the program will work mainly through ROTC's in high schools and colleges. Also envisioned as part of the program is establishment of a National Science Center for Communications and Electronics at Fort Gordon, Georgia, home of the Army Signal Corps.

The plan is to involve educators and members of professional organizations as well as people from the military services and industry in a Partnership for the Development of National Engineering Resources. The program's mission, as described in a briefing paper, is to "increase the number of college trained engineers available to industry, government, the military services and the scientific community."

Major impetus for the program has come from Defense Communications Agency commander, Lieut. Gen. W. J. Hilsman. The program has gained the blessing of top Department of Defense officials. President's science adviser George A. Keyworth concurs with the idea, but is taking no direct role in the program. Other civilian agencies in the government or major educational organizations are not currently involved.

A pivotal role in the program is to be played by the Armed Forces Communications and Electronics Association (AFCEA), which combines aspects of professional and trade associations. AFCEA's members are drawn from the military and industry, in the latter case working mostly for defense contractors.

In a pilot program now operating in the Los Angeles area, technically trained AFCEA members and junior officers will visit schools and colleges to discuss careers in engineering with students. Experience gained in this first phase will be evaluated with the idea of refining the program before it is applied on a national scale. Now in the planning stage are efforts to create links between industry and students through plant visits, student at-

tendance at professional meetings, and a variety of educational and work opportunities to be offered by industry. Junior chapters of AFCEA may be established for interested students. Options for changing military career patterns to make military service more attractive for technically trained personnel are also under discussion.

The National Science Center for Communications and Electronics would be built with private funds by a nonprofit organization. Final details have not been settled, but the center is expected to be part science museum open to the public and part "campus without walls," using modern communications technology to make educational material and information available to schools and colleges across the United States.

The project has the enthusiastic support in Congress of Georgia Senator Sam Nunn who in July submitted a concurrent resolution "encouraging" establishment of the center. The government would provide land for the center at Fort Gordon, but funds for construction—estimated at \$17 million—would come from private sources. Support from industry, private foundations, and individuals is now being sought and an announcement of financial commitments is promised by the end of the year. The government would be asked to pay operating expenses for the center after completion.—*John Walsh*

ACLU to File Second Anti-Creationist Suit

The American Civil Liberties Union (ACLU) is making final preparations for filing suit against the State of Louisiana concerning the Creationist-inspired "Balanced Treatment" act, which was signed into law on 21 July. The act, which is almost identical with the one approved by the Arkansas legislature earlier in the year, mandates the teaching of creation science when evolution science is presented in public schools.

The Arkansas law is already the subject of an ACLU suit, and this is due to go to court on 7 December. The complaint in the Arkansas case is that the law violates the constitutional separation of church and state. "Our

action against Louisiana will be very much along the same lines as the Arkansas complaint," says ACLU attorney Jack Novick.

In addition to the ACLU, a number of religious bodies and individuals are listed as complainants in the Arkansas suit. Although the list of complainants has yet to be finalized for the Louisiana suit, it is likely to follow the same pattern. Also to be settled is the date for filing the complaint in the federal district court there, and this is likely to be before the start of the Arkansas trial.

The American Association for the Advancement of Science and the National Academy of Sciences are to offer supporting evidence to the court.—*Roger Lewin*

French Nuclear Policy Only Slightly Revised

France's socialist government came out of the parliamentary debate on nuclear power policy in mid-October with its plan for a modestly reduced national nuclear program intact. Parliament endorsed a proposal that six new plants be ordered in 1982 and 1983 instead of the nine sought by the previous government.

The plan given parliamentary assent also calls for expansion of the reprocessing plant at La Hague near Cherbourg where reactor fuel from both France and foreign countries is reprocessed. The plant is to be doubled in size and a new plant of equal size built so that La Hague will have a capacity of 1600 metric tons a year.

The La Hague expansion was a volatile issue before the parliamentary debate. The Confédération Française Démocratique du Travail (CFDT), the noncommunist labor organization that has close ties with the ruling Socialist Party, has been at odds with the party on its nuclear program. The CFDT sought deferral of expansion of La Hague, where some radioactive leakage has occurred, and opposed reprocessing of foreign fuel, on the grounds that it made France a depository for other countries' nuclear waste.

Before the debate, Premier Pierre Mauroy had ordered foreign shipments into La Hague stopped. This was apparently to avoid exacerbating

feelings at the time of the debate, since shipments were resumed after the debate. Mauroy took the lead in arguing for the government's nuclear policy. Emphasizing economic concerns, he urged parliament not to let a lack of energy hamper the government's economic program. In respect to La Hague, the government took the stand that commitments had been made to Japan, Sweden, and West Germany and that France should honor its obligations.

Divisions in the Socialist Party on nuclear matters had produced a heated discussion within the party in advance of the debate. Socialist members, however, put aside their differences to support the government in parliament.

In the campaign before his election, President François Mitterrand had indicated he would slow the rapid pace of the nuclear power program and had won the backing of French environmentalists in the so-called "green party," which has become a significant factor in French politics. The antinuclear group was pleased after the election when the government "froze" five sites being considered for new nuclear plants and canceled one project at Plogoff, a scenic spot on the Brittany coast that had been a special target for antinuclear protesters.

Mitterrand's actions since taking office have been seen by the environmentalists as a pronuclear shift, causing some estrangement. What is unusual in Europe is that France also has a substantial number of pronuclear activists drawn mainly from labor organizations and from among those who feel that economic well-being depends on energy independence.

Since the debate, nuclear militants of both persuasions have focused on the five sites for new plants that were frozen by the government. Recently, the government has sought local consent to unfreeze the sites by asking municipal councils in the areas affected to vote on the projects. In the case of adverse decisions, provision was made for review by regional councils and final authority was reserved to the central government.

Three of the projects got the go-ahead at the municipal level. At two sites, Golfech in southwest France and Le Pellerin on the channel coast, the local governments said no. In the case of Golfech, where the controver-

sy has been most violent, the regional council reversed the local stand. On Le Pellerin, the regional council has not yet acted.

The government's broader intentions in the nuclear field will not be known until the end of 1982 when it is to set schedules for plant construction to 1990. The question of future French policy on breeder reactors will not be resolved until after the Super-Phenix 1200-megawatt commercial prototype breeder reactor in southeast France goes into service, probably at the end of 1983.—**John Walsh**

Medfly in California Down but Not Out

The notorious Medfly has faded from the national news, but in California the threat lingers on, although at a much reduced level. In Florida, state and U.S. Department of Agriculture officials on 12 November issued a celebratory announcement of eradication of the pest in the much smaller outbreak there.

Officials of the California project are in the process of reducing the extent of aerial spraying in the five-county San Francisco Bay area under Medfly alert. At the peak of the campaign some 1300 square miles were in the spray zone. By December, if things go well, the spray area will be cut to 200 square miles or less.

Medfly project deputy director Dick Jackson says that spraying of the pesticide malathion ceased in a 500-square-mile area in early October. Officials say they will go ahead with plans to stop spraying another 630-square-mile sector in San Mateo, Alameda, and Stanislaus counties on 17 November despite the recent find of two live fertile Medflies in Mountain View in Santa Clara County. A poll of the project's advisory committee produced a consensus for the phasing out of spraying. Project officials say, however, that the spraying area around the Mountain View infestation may be widened. Further cuts in spraying in Stanislaus County and in the small spray area in Los Angeles County in southern California will be made by the end of November.

The situation in general is "looking good," says Jackson, but officials plan

to continue spraying operations into next spring and say they would not be surprised to find small infestations then.

Repeated spraying with the pesticide malathion has been carried out under the program and fruit stripped from trees in areas where even a single fertile fly is found. Where maggots appeared the ground was sprayed with the pesticide diazinon several times.



Jackson says that the key to detection has been the widespread placement of traps baited with a synthetic lure for Medflies. Some 120,000 traps have been distributed around the state in areas where host material grows. In the critical Bay Area infestation zone, some 28,000 traps have been placed in unusually heavy concentrations of as high as 50 traps per square mile.

The serial spraying program will be adjusted to winter conditions. Cooler weather slows down the Medfly life cycle. In its native subtropical habitat there may be four or five Medfly cycles a year. In northern California, only two generations a year may be produced. Stretches of warmer weather in the winter speed up Medfly emergence from the soil where they pupate. Heavy rains, characteristic of Bay Area winters, wash pesticides off sprayed surfaces. Spraying is timed, therefore, by taking into account "degree days" above a certain temperature and is done when dry weather is predicted.

In Florida, the pronouncement that the Medfly had been eradicated was coupled with lifting of a quarantine on shipment of "host material" from the area. The infested area south of Tampa is not a commercially significant fruit-growing area. In California, the quarantine still applies to a 3500-square-mile "regulation" area much larger than the spray zone.

—**John Walsh**