that NASA contractors, who draw from the same pool of talent, have a far better record in equal employment than NASA. But contractors do not operate under the Civil Service constraints, veterans' preference, and periodic reductions in force that characterize the NASA of the 1970's. What's more, the Office of Federal Contract Compliance is a considerably stronger enforcement agent than the Civil Service Commission, which is responsible for seeing that affirmative action is taken within the government.

Nonetheless, the overwhelming white male domination of NASA is making it an increasingly conspicuous and embarrassing anomaly among government agencies. "You have to take a Kamikaze attitude to work there," says one woman, a consultant, who says she never walks down the hall with a bunch of papers in her hand because "they'll think I'm going to the Xerox machine."

It would appear that considerably stronger pressure than has hitherto been exerted is needed to get NASA moving. It may be that the current uproar will culminate in such pressure.

—CONSTANCE HOLDEN

Energy Crisis: President Sprints to Catch Up With Events

It was the President's fifth full dress statement on energy since the summer of 1971, and in important ways his nationwide broadcast of 7 November marked a watershed with all the others. As recently as last September, when predictions of winter fuel shortages still ranged between 3 and 5 percent, problems of national energy supply constituted, in the President's estimation, no more than a "challenge." Now, in the face of a Middle East oil cutoff and consequent shortages of 10 to 17 percent or more, the word was "crisis."

In the face of crisis, what had been a firm but undefined commitment to spend $10 billion on energy R & D over the next 5 years reappeared with the resplendent name of Project Independence. The President likened it to the Manhattan and Apollo projects, and said its goal was to give the nation the capacity to meet its own energy needs by 1980. But "self-sufficiency," and technology's role in achieving it, remained to be clarified, and this ambiguity quickly stirred some criticism in Congress. "We are foolish to believe any longer that technological tricks can relieve us of our need to husband nonrenewable resources," Representative Morris K. Udall (D–Ariz.) said in a speech the next day. "No amount of cheerleading will provide an instant solution."

The message's most immediate result was a galvanic effect on Capitol Hill. In the week that followed, it seemed increasingly likely that Congress would not only act to give the President some (though not all) the emergency authority he wanted to regulate energy supply and demand, but might also move before the December recess to reorganize the federal energy R & D establishment, as the White House has asked. Suddenly the prospect loomed that the Atomic Energy Commission would be transmuted into a new Energy Research and Development Administration (ERDA), built on the core of the AEC's staff and laboratories but without the AEC's regulatory powers.

The spurt of congressional activity derives in part, obviously, from the urgency of the circumstances. But the White House traded at least two noteworthy concessions for fast congressional action, and both seemed to have gotten more mileage than any of the President's periodic complaints about foot-dragging on energy legislation.

For one, the White House appeared to back off substantially from its original proposal for emergency regulatory powers. In a bill printed up for the Senate Interior Committee and dated 6 November, the day before the President's speech, the White House asked for the authority to suspend the three major environmental laws passed since 1969, without public hearings, for indefinite periods, and under circumstances vaguely defined as "any emergency deficiency in energy supplies" resulting from foreign export restrictions and limits on domestic U.S. supplies. The White House bill asked authority to grant nuclear power reactors operating licenses for 18 months without public hearings; to exempt "any stationary source of air pollutant emissions from any emissions limitations . . . under the Clean Air Act"; to exempt any fuel-producing facility or generating plant from regulations of the Federal Water Pollution Control Act or any state pollution law; to shield such actions from judicial review under the National Environmental Policy Act; to ration fuel; to encourage the use of alternative fuels (such as coal and natural gas) by imposing special taxes; and to deregulate natural gas prices.

The bill was prefaced with a note that it did "not represent the official position of the Administration," but was instead only a proposed alternative to a much more limited measure introduced 2 weeks before by Senator Henry Jackson (D–Wash.), chairman of the Interior Committee, which has jurisdiction over such legislation. Jackson's bill, by contrast, defined an emergency as a petroleum shortage of 5 percent or more, would not allow the deregulation of natural gas, and would authorize the President to lift air pollution regulations on power plants only as long as shortages lasted and only on a "case-by-case basis."

By the time the President delivered his message, however, requests for sweeping powers to suspend the nation's environmental laws had vanished. What remained was a tip of the hat to Jackson and others "for the hard work that's already been done" on emergency legislation and a request that temporary variances be allowed for federal emissions controls on a "case-by-case basis." The Senate Interior Committee quickly spurned the Administration's plea to deregulate the price of natural gas at the wellhead, but reported out the essence of Jackson's bill on 12 November.

The Energy Research and Development Administration poses equally complex and contentious issues, but both the House and Senate government operations committees—which have jurisdiction over executive branch re-

organization—are talking optimistically about making progress toward an ERDA bill by the end of the year. Congressional enthusiasm over ERDA, however, is not universal. Some, including Representative Mike McCormack (D–Wash.), the chairman of the science and astronautics subcommittee on energy, are frankly skeptical that the new agency could provide the kind of "focused leadership" for energy research that Nixon said was urgently needed. McCormack told *Science* that he thinks an energy agency built around AEC and a fragment of the Interior Department represents a "completely inadequate and chaotic" conception that overlooks the skills and facilities of a number of other R & D agencies.

In the ERDA issue as well, Henry Jackson, as the Senate's prevailing power on energy policy, plays a kingpin role. (Besides being chairman of the Interior Committee, he is a member of the Government Operations Committee and the Joint Committee on Atomic Energy.) His House counterpart is Representative Chet Holifield, (D–Calif.), chairman of government operations, a dominant figure on the JCAE, and a man determined to keep the AEC more or less intact.

Largely in deference to Holifield and the AEC, the White House earlier this year abandoned its original plan to dismantle the AEC, put nuclear weapons development in the Defense Department, and lodge the rest of the agency in a mammoth new Department of Energy and Natural Resources—the latter to be built around the present Interior Department. When this idea miscarried, the White House proposed ERDA as an independent, companion agency to the DENR (*Science*, 13 July). Under this plan, ERDA would consist of the AEC plus Interior's Office of Coal Research, minus the five-member commission itself and the AEC's relatively small regulatory arm; these would form a new, nuclear regulatory agency. The Administration bill said nothing about weapons, although they take up half the AEC's $2 billion budget; by implication, AEC's military programs would remain in ERDA.

Holifield appeared happy with this arrangement, but Jackson vacillated. First he seemed to support ERDA, then, in mid-September, he reversed field and contended that energy R & D belonged in a single resource agency, the DENR. There the matter has remained deadlocked. In a concession that the White House hoped would break the impasse, Nixon asked in his 7 November message that the House and Senate concentrate on ERDA first, and to delay further discussion of DENR for now.

This move seems to be working only half way. Holifield is urging his committee to complete action on an ERDA bill by Christmas. But an aide to Jackson forecast a "dim" outlook for Senate passage in that short a time, and added that the Senator does not want to split discussions of energy reorganization into "bits and pieces." Jackson is pressing instead for passage of his own, $20 billion, 10 year energy R & D plan, which he introduced last March.

In any event, a host of fundamental policy issues remains unsettled:

- What, for example, would be the relation between ERDA and the proposed regulatory agency, the Nuclear Energy Commission?
- Do nuclear weapons programs belong in an agency whose main mission is "clean energy" R & D?
- Would ERDA answer to Interior Secretary Rogers C. B. Morton, to White House energy chief John Love, or directly to the President?
- Could an agency built around the AEC make effective use of the National Bureau of Standards, the National Science Foundation, and the space agency?
- Does it make sense to put research and resource policy in two separate and rival agencies?

The skeptics, McCormack among them, see the White House as trying to stampede Congress into accepting a reorganization plan that, in calmer circumstances, might not stand on its own merits. Some influential members seem willing to run, and some do not.

—ROBERT GILLETTE

New Leadership at NCAR

Racked by a succession of crises and 10 months of uncertainty, the National Center for Atmospheric Research (NCAR) at Boulder, Colorado, may now be over the worst of its troubles. The laboratory's board of trustees, known as the University Corporation for Atmospheric Research (UCAR) has appointed a new president, who will take up his duties this month. He is Francis P. Bretherton, professor of earth and planetary sciences at Johns Hopkins University. Bretherton replaces Walter Orr Roberts, who several months ago expressed a desire to retire.

The appointment of Bretherton has occasioned some surprise at NCAR because the new president of UCAR was expected to be an elder statesman type with some experience of the Washington scene. Bretherton, aged 38, is an alumnus of Cambridge University and has held teaching appointments in this country since 1967. A distinguished fluid dynamicist, he is still an active scientist and has accrued no great administrative experience.

Among the problems Bretherton will face are low morale, doubts about the quality of some of the science at NCAR, and an apparent resolve on the part of NCAR's major patron, the National Science Foundation (NSF), not to increase NCAR's budget until some of the difficulties are ironed out (see *Science*, 5 October 1973). Asked about his preconditions for taking the job, Bretherton says he "has the authority to make any changes that are necessary." His primary thrust will be to improve the scientific quality of the programs. "This inevitably means some reshuffling will have to go on, but I haven't made up my mind what this is going to be," he says. Bretherton is favorably impressed with the present quality of science at NCAR and says he is convinced the problems are soluble.

A man with a major role in Bretherton's appointment is Thomas F. Malone of Butler University, Indianapolis, who is chairman of UCAR and was head of the search committee for a new president. Malone says that top NSF officials reassured him that they were not going to "pull the plug out" on NCAR and that their positive commitment to the NCAR concept would continue.—N.W.