Establishing a measure of control over energy growth may also require a degree of administrative stability and constancy that has so far eluded the top policy-making machinery of government. The creation of an Energy Research and Development Administration promises to bring a new coherence to the research effort; between ERDA's budget and related legislation passed by Congress last year, the government now has on paper an energy research policy. But the flux of new faces in the top policy spots continues, and many regard the FEA as only an interim step toward consolidation with the Interior Department (and possibly ERDA) to form a long-envisioned Department of Energy and Natural Resources (DENR).

While this possibility hangs in the air, it's still hard to tell who President Ford's chief energy adviser really is. The organization charts show Interior Secretary Rogers Morton to be running a de facto DENR with himself as chairman of the Energy Resources Council and FEA chief Frank Zarb as his executive director and subordinate. But some who know both men describe Zarb as an incisive man of less leisurely pace than Morton and likely to take the upper hand.

Now that the homework is done and the search for a policy structure has calmed down, it's up to President Ford to decide who his energy adviser is and to take his advice.

—ROBERT GILLETTE

The Environment, a "Mature" Cause in Need of a Lift

. . . The environmental movement has matured, and the nation and its environment have benefited in the process. Looking to the future, we can expect further accomplishments in enhancing our environment. . . .—From the message by President Gerald R. Ford in the 1974 report of the Council on Environmental Quality.

Maturity is in the eye of the beholder, and not everyone will share President Ford's apparent satisfaction and optimism about the environmental movement's achievements and prospects. Indeed, one can find reason to believe that the movement is losing its momentum. Further, some will conclude that the momentum will not be regained in the absence of positive national leadership to bring about a new policy synthesis—a synthesis of, on the one hand, the policies necessary to promote growth of energy resources and economic expansion generally, and, on the other hand, the policies aimed at achieving a high quality of life.

For the environmentalist, the year 1974 was one of holding actions and few positive gains. The two most important pieces of environmental legislation, the land use and strip mining bills, failed of enactment; the strip mining measure cleared the Congress but, at this writing, it awaits a veto promised by the President. Moreover, it was only the strong stands taken by Administrator Russell E. Train of the Environmental Protection Agency (EPA) and Russell W. Peterson of the Council on Environmental Quality (CEQ) that stopped moves within the Nixon Administration to weaken severely the Clean Air Act and the National Environmental Policy Act—this to have been done, of course, in the name of coping with the energy crunch. And it is by no means clear yet that President Ford will be any less inclined than his predecessor to sacrifice environmental goals for the sake of short-term expedients to facilitate energy production.

Perhaps the most that the environmentalist can say for 1974 is that it was a year in which public concern for the environment was shown to be no passing fad. That concern did not dissipate with the onset of energy shortages and economic recession. To judge from the outcome last fall of elections in which environmental issues were important, most people have remained remarkably steadfast in their interest in protecting and enhancing the quality of life.

As the year wore on, there seemed to be increasing recognition that wasteful use of energy resources, environmental abuse, and double-digit inflation are all directly related. Certainly, the arguments by some industry representatives that environmental protection programs are themselves a significant cause of energy shortages and inflation did not go unquestioned.

Such arguments were vigorously challenged by EPA and CEQ. A study by EPA indicated that even in 1980, when EPA programs presumably will be far advanced, its standards and regulations will account for only 1 percent of total U.S. energy consumption. A CEQ study concluded that public and private expenditure for environmental protection was accounting for less than 0.5 percent of the annual rate of inflation.

Although public interest in protecting and enhancing the quality of life apparently has remained strong, environmental programs have not yet offered a clear, unequivocal promise of results in keeping with the large sums that are being expended. According to CEQ forecasts, $194.8 billion in public and private funds will be spent for environmental protection during the 10-year period 1973 to 1982. To date, the payoff from environmental expenditures—which amounted to an estimated $6.3 billion in 1973—has been modest, even allowing for the fact that most large-scale cleanup efforts began only a few years ago.

In making public the CEQ annual report last month, Peterson summarized a key finding: "We have slowed the growth in pollution but, with some exceptions, have yet to reverse the tide. And new concerns keep arising which cause anxiety."

The situation with respect to air pollution is such as to dismay anyone who might have believed that clean air was right around the corner. Levels of particulates in urban areas have decreased only slightly in recent years; small particulates are proving especially difficult to control, and these are the ones most hazardous to health.

Although sulfur dioxide levels fell by about 50 percent during the past 7 or 8 years, there are now indications of a change from this favorable trend. As natural gas and low-sulfur oil have become more scarce or costly, the electric utilities serving some cities have shifted back to high-sulfur fuels. Furthermore, ambient concentrations of sulfates, which may be another particularly hazardous type of pollutant, are not de-

clining. Carbon monoxide levels vary from city to city, with some communities reporting improvement and others reporting deterioration.

Water pollution has not been yielding readily to abatement efforts either. An EPA study of 22 river systems has shown fewer coliform bacteria and lower oxygen demand, but disturbing evidence of concentrations of nutrients, heavy metals, and pesticides. Moreover, it is now recognized that diffuse "nonpoint" pollution sources—such as urban streets, agricultural lands, and residential construction sites—represent a large and too long neglected problem. In fact, unless pollution from these sources can be abated, water quality may remain at unacceptably low levels even after pollution from factory effluent pipes, municipal waste outfalls, and other "point sources" has been stopped.

In addition, potential public health threats from the contamination of drinking water with asbestos and toxic chemicals have now been identified. The Safe Drinking Water Act signed by the President at mid-December comes as a welcome, if belated, response to a problem which is likely to prove extremely difficult to correct.

Purity of air and water are, of course, not the only indicators of environmental quality—in addition, there are such indicators as peace and quiet, natural beauty, abundance of native flora and fauna, pleasing rural landscapes and productive farmlands, and cities and towns that are safe, attractive, and conveniently designed. Although numerous federal, state, and local programs deal piecemeal with one or another of the various aspects of environmental quality, there remains a general lack of policies to guide development according to comprehensive standards and criteria that promote a high quality of life.

The National Environmental Policy Act (NEPA) of 1969 has been useful chiefly as a means of forcing officials to consider the environmental impact of proposed development projects and to identify alternatives—as of 30 June 1974, impact statements had been prepared on 5430 federal agency actions. Despite its name, NEPA is really much more an information act than a policy act. NEPA simply was not designed to guide even federally sponsored or approved development activities, much less all the private, state, and local activities outside NEPA's purview.

The consequences of not having comprehensive policies to guide growth and development are all too apparent. For example, they are evident in suburban sprawl, decaying inner cities, endless conflicts over the siting of oil refineries and power plants, and the degradation of choice recreation areas by promiscuous vacation home development.

Now, given the energy crunch coupled with the continued expansion of the U.S. population, the lack of comprehensive policies to guide growth and development has, in the minds of many, become a critical matter. Over the next 25 years, the population will increase by 50 million or more, with some 27,000 new households (the equivalent of the population of Kalamazoo, Michigan) being formed each week. The current slump in home construction aside, a huge expansion in housing is sure to come, and the only question is where and in what form it will occur.

As for the energy crunch, the response will of course have to come in two ways, through intensive development of domestic energy resources and through energy conservation. Conservation could include measures such as greater recycling of materials, better insulation of buildings, and—developing new communities, and redeveloping some old ones, in such a way as to reduce dependence on the automobile. With respect to the latter, land use and growth policies might be used to bring home and job sites near one another and to have new communities built compactly and in places convenient to public transportation.

Potential for Conflict

In the development and use of energy resources—coal, offshore oil, geothermal areas, or whatever—the potential for conflict with environmental values will of course be enormous. The immense scale of the coming energy development can be appreciated, for instance, from the Department of the Interior's plans to grant oil leases this year on at least 7 million acres of outer continental shelf lands, half of it off the Atlantic coast where there has never previously been any development of oil. Controversy over whether to allow oil refineries or petrochemical industries along the mid-Atlantic coast may soon be greatly intensified. Similar conflicts will arise in the West over coal. Governors in the Rocky Mountain and Northern Great Plains regions already are vowing not to let their states be abused as "energy colonies."

In light of all the foregoing, many in Congress are now convinced of the necessity to establish national policies to guide growth and development—although, to avoid preempting state responsibilities, usually such policies would be "national" only that they would set certain guidelines and standards for the states and local governments to follow. Although none of the land use legislation seriously considered in the past has gone this far, any really adequate national land use policy probably would have to require the state and local governments to establish a system of land classification—a system sufficient, at a minimum, to preserve prime agricultural land and the most important natural areas (such as coastal wetlands) and to identify and protect from misuse sites especially suitable for development, whether residential or industrial, as in the case of a major energy facility. In addition, special state oversight of the most environmentally "critical" areas and of large-scale land development would seem indicated.

An adequate policy might also require states to impose certain new environmental and "energy efficiency" standards. For instance, commercial strip development along urban highways is now generally recognized as an esthetic abomination and a cause of traffic hazards, motorist frustration, air pollution, and wasted energy. Thus, a standard prohibiting most further strip development would seem sensible. And, as indicated earlier, another example of an appropriate standard would be one requiring major new developments to be so situated and designed that breadwinners and housewives are not helpless without a car.

Beyond the kind of land use regulation mentioned above is the important but still ill-defined matter of "growth policy." A paper on "National Public Works Investment Policy" has just been prepared by the Academy of Contemporary Problems for the House Committee on Public Works. Inspired by the Club of Rome's study *The Limits to Growth*, the conservation subcommittee of the House Merchant Marine and Fisheries Committee has conducted hearings on "growth and the environment." But, if any federal legislation to influence growth through public investments or other means should ever be passed, it undoubtedly

will be only after much further study and pondering.

Indeed, the land use legislation itself has been long in evolving, and, if resurrected this year in the same form in which it died last year (the House voted 211 to 204 not to take it up), it will promise only a modest and cautious beginning. Perhaps wisely, given the political resistance to land use regulation, the principal congressional sponsors of land use legislation, Senator Henry Jackson (D–Wash.) and Representative Morris Udall (D–Ariz.), have favored a limited approach emphasizing federal planning grants and state oversight of critical areas and large-scale development. Their bills would not have mandated comprehensive land use controls. Furthermore, a "sanctions" provision to withhold some highway and airport development funds from any state failing to establish the appropriate land use controls was finally dropped.

The Ford Administration will be under some political pressure this year to propose land use legislation at least as strong as that advocated by Udall, who has already announced he will seek the presidency in 1976, and by Jackson, who has all but announced his own candidacy. An Administration task force headed by Secretary of the Interior Rogers Morton is currently drafting a land use bill, but just what form it will take is as yet unclear.

Thus far, President Ford's concept of environmental policy seems to involve bringing environmental and development values into some kind of vague "balance." He appears to believe that, for these concerns, there is little common ground, although he does acknowledge the environmental benefits of energy conservation. Yet, in truth, the White House may be overlooking a chance to reduce conflicts between development and the environment through policies to regulate land use and guide growth and development. And, while such policies would have no bearing on certain of the more intractable environmental problems, they could help keep many air and water pollution problems from growing worse—as, for instance, by seeing that no additional nonpoint sources of water pollution are created.

The White House actually has shown little sign of taking much interest in environmental issues, even though the President gives Train and Peterson respectful hearings. Indeed, suggestions from CEQ that the President send an environmental message to Congress this year have thus far been coldly received. A cynic might think that when the President speaks approvingly of the environmental movement's "maturity," what he really likes is the fact that it isn't coming over as loudly as it did in the early 1970's.

—LUTHER J. CARTER

Congress Gets on with Reform, Seeks to Reassert Itself

The 94th Congress convenes on 14 March, and if the senators and representatives have been reading their clippings, they will expect to find significant changes in the patterns of power in the Capital. The big Democratic victory in the November elections will give the majority party greater leverage in Congress and capacity to trump presidential vetoes. Beyond this legislative calculus, some observers think the Nixon resignation and the aftershocks of Watergate will bring about the most substantial reversal to the growth of "presidential government" since the New Deal.

The prospect of a revaluation of congressional influence prompts the question of who runs Congress. The civics-class answer is the majority leadership, operating through the committee system according to party policy. But in neither Senate nor House has the leadership been particularly assertive in recent years and the House has experienced a wave of democratizing reform in procedures and organization which appears to be still rolling.

The momentum of reform and the arrival of about 60 newly elected Democrats (*Science*, 22 November), most of them relatively young, liberal, and apparently sympathetic to change, could make for a lively spirit of iconoclasm in the 94th Congress. In the House the basic shift of power has been to the Democratic Caucus, to which all Democrats belong. This is likely to mean an enhancement of majority rule (in the sense of a majority of the majority) at the expense of committee chairmen and other senior members who have formed an effective holding company in the House for as long as anyone now serving in Congress can remember.

Some with a sense of congressional history now see the possibility of a return to the reign of "King Caucus," which occurred after 1909 when the House rebelled and unseated an autocratic Republican Speaker, Joseph G. Cannon of Illinois. The House can be dominated by a strong Speaker, an alliance of powerful committee chairmen, or the caucus; normally it has been run by combinations and permutations of the natural competitors for power. History seldom repeats itself (King Caucus had its heyday when a Democratic president, Woodrow Wilson, and an unusually able Democratic majority leader, Oscar Underwood of Alabama, were able to cooperate effectively). And what the rise of the caucus is more likely to signal in the present context is the end of an epoch during which the so-called "conservative coalition" made up of Southern Democrats and Midwestern and Western Republicans dominated Congress and particularly the House, essentially by exploiting the seniority system.

The coalition was formed to oppose President Franklin D. Roosevelt and, since World War II, has been effective far beyond its numbers in derailing, delaying, or modifying legislation, particularly economic and social legislation. The coalition has exercised influence through its control of congressional machinery, which it maintained through seniority, as well as by a command of parliamentary skills and legislative knowledge.

The post-Watergate surge of reform in the House was basically aimed at reducing the power of committee chairmen, and the main force of the culminating attack in the caucus in early December was directed at the Ways and Means Committee, which exercises jurisdiction over all revenue measures. The caucus voted to raise the number of members of Ways and Means from 25 to 37, increasing the representation of junior, younger, and more liberal members. More drastic was the vote to remove the power of the Ways and Means to act as the Democrats' committee on committees and to make