what the State Department, in a letter to Senator Percy dated 13 May 1977, said: "We have supported informally the reported decision of the Mexican government to use in the future only 2,4-D" on marijuana plants. Dugstad now states that he was quoted out of context by the *Post*. The letter to Percy also states that "we have been advised that in the future, only 2,4-D will be used against both poppies and marihuana because tests showed it was more effective and safer to handle." Dugstad recently told *Science*, however, that "the Mexicans are staying with the present system of using paraquat on marijuana and 2,4-D only on opium poppies," because of continuing experience that shows each herbicide to be most effective on the plants that are sprayed with it now. He added a rhetorical question that prompts greater uncertainty: "Is it really appropriate for the U.S. to direct another government to use one chemical instead of another?"

Another unanswered question is whether the Mexicans are using herbicides besides paraquat and 2,4-D on opium poppies and marijuana. A report filed in 1976 by Walter Gentner, an employee of the U.S. Agriculture Department who went to Mexico to observe the operation, states that he saw the herbicide 2,4,5-T, a toxic chemical that may cause cancer, in a shed where other herbicides were stored. He suggested then that a special investigation be initiated, but up to now none has been conducted. Dugstad said that "to the best of our knowledge, no herbicides besides paraquat and 2,4-D are being used by the Mexicans."

In a sense, the uncertainty of this statement is understandable. The State Department has been caught between the proverbial rock and hard place in this affair, which is fraught with international political complications and the potential for exposure of an error in U.S. policy. To admit at the start that paraquat-laden marijuana posed a health hazard for users in the United States would have been to admit that the Mexicans had not made the wisest choice of chemicals and, moreover, that despite the best application of American ingenuity and good intentions, heroin and marijuana are continuing to flow across the border in quantities that pose a hazard to U.S. citizens. What seems clear now, however, is that unless the State Department immediately places all of its cards on the table for everyone to see, its own credibility and wisdom, and possibly its good intentions, will remain in question.

—R. JEFFREY SMITH

New York Puts Together Its Own State Energy Policy and Plan

Albany, New York. The seemingly endless debate over national energy policy is centered in Washington, but a lot of the action is going on in the state capitals, this one being a good case in point.

The vitality of state government is especially evident here. The designers of the gleaming new complex of state office buildings known as the Empire State Plaza apparently never dreamed there would ever be an energy crisis, and its five huge vertical slabs of glass, concrete, and marble can be regarded as a monument to energy inefficiency. But, in light of the initiatives being taken by New York with respect to energy, the plaza and its massive edifices—"instant Stonehenge" some call it—also can be viewed as symbolic of the increasing assertiveness of one major state in a critically important field of national policy.

Although New York may not yet have accomplished as much as certain other states such as Minnesota and California, it has come a long way since the Arab oil embargo 4 years ago in building the legislative and institutional base for a significant state energy policy and program. Its leaders seem convinced that, while the opportunities for a constructive state role in the energy field are limited and constrained, they are nevertheless very real.

To put New York's efforts in a true perspective at the outset, a word about the limits and constraints is in order. For one thing, the federal government is necessarily preempting the leading if not the sole governmental role in a wide range of activities, such as regulating the price and distribution of energy, fostering development of new energy supplies through a large R & D program and the leasing of federal lands containing energy resources, and establishing energy efficiency standards (as in the case of the automobile). Then, on top of this, for New York, and indeed for any state, there can be some fairly tight limits to what the public will accept in the way of conservation measures, especially if most other states are making lesser demands on their citizens and commercial and industrial enterprises.

But, as New York is trying to demonstrate, there is a great deal that a state can do by acting on the special opportunities arising from its own particular circumstances; by trying to influence or shape federal policies to suit its own needs; and by proceeding boldly in cases where federal policy has been laggard or needlessly cautious. Among this state's first positive actions was to establish two new state energy agencies.

First, in late 1975, the Atomic and Space Development Authority, which had been established in the early 1960's as essentially a promotional agency for nuclear power, was abolished and replaced with the New York State Energy Research and Development Authority (NYSERDA). This agency, which has been spending up to $7 million a year on R & D, has the mission of supporting and encouraging projects of particular relevance to New York. Its recently completed survey of technologies that might be used to convert much of New York City's vast outpouring of solid wastes (25,000 tons a day) into fuel for electric power generation is a good example.

A key part of NYSERDA's strategy is to encourage the U.S. Department of Energy (DOE) to undertake or support R & D work that has a New York orientation or application. One of its ways of doing this is to review DOE project proposals and offer to participate in those that meet its criteria. For instance, the two agencies jointly sponsor a current demonstration of heat-recovery and heat-pump technologies that can help restaurants conserve energy. All told, NYSERDA claims to have had a part in bringing some $8 million in federal R & D funds to New York over the past 2 years. While its achievements to date appear modest, NYSERDA has the op-

0036-8075/78/0224-0864$00.75/0

portunity to do much more in the future.

The agency can, for instance, help shape R & D work sponsored by the utility industry to fit New York requirements. To this end it is jointly sponsoring with the Electric Power Research Institute (EPRI) a project on fluidized bed combustion of coal. NYSERDA's opportunities for fruitful collaboration with EPRI may be large, for the New York utilities are required by the PSC to allocate 1 percent of their gross receipts (or about $53 million last year) to R & D, and much of this money goes to EPRI.

In 1976, the Legislature created another potentially important new energy agency, namely the State Energy Office (SEO). The SEO mandate is to carry out the new energy conservation programs for which federal funds have been becoming increasingly available and to put together an overall state energy plan. Just what the plan shall consist of, the Legislature did not say. But as Governor Hugh L. Carey and his commissioner of energy, James L. Larocca, understand their mandate, the energy plan—to be revised every 2 years—would in effect attempt to establish a "determinative," if necessarily approximate and uncertain, energy mix and level of consumption for the state.

Inasmuch as New York depends on sources outside its borders for all of its primary energy except a modest amount of hydropower and a very small amount of natural gas, the SEO's control over future energy supplies will be at best tenuous. But it may be able to increase supplies at least marginally by permitting, as the Legislature has now decided to do, the drilling of gas wells in the bottom of Lake Erie; it can also encourage exploration and development of oil and gas resources on the Atlantic outer continental shelf.

Furthermore, if the collectible refuse generated by New York City and other urban communities can in fact be burned as boiler fuel, it represents a resource equivalent to 25 million barrels of oil each year—hence one which the SEO intends to have put to good use. In the case of electric power generation, over which the state already has a firm regulatory hold, the SEO could be authorized to determine the amount and the kind of new generating capacity that is to be built, although the PSC and other agencies would almost certainly have to be allowed to take account of new circumstances in discharging their own responsibilities. Also, the SEO can continue to control the allocation of energy supplies during times of shortage.

The SEO has recognized that, no matter how well the state's own efforts in the energy field should turn out, most major issues will be dealt with through policies and programs made in Washington. It has decided, therefore, that it had better damn well try to see to it that the policies and programs made there are to its liking.

After President Carter put forward his energy bill last spring, the SEO quickly analyzed the measure from the standpoint of its potential impact on New York. Then, the two full-time energy policy lobbyists assigned to the state's Washington office made sure that New York's potent 41-member congressional delegation knew how their constituents might be affected by the various provisions of the bill and how the measure could be improved.

For the most part, the SEO found that the President's proposals would be good for New York. Its staff analysis concluded, for example, that the proposed oil equalization tax and per capita rebates would favor the state inasmuch as its consumption of products refined from domestic crude oil was, on a per capita basis, only about two-thirds the national average. Also, it pointed out that the proposed tax credits for home insulation were favorable to a state such as New York, with its relatively severe winter climate and substantial stock of older and poorly insulated dwellings.

The bill's deficiencies from the New York standpoint were also noted, however. For instance, it was pointed out that the proposed program of conservation tax credits excluded multifamily housing, which accounts for 60 percent of New York's stock of housing units. As it turned out, efforts by the SEO lobbyists and the New York congressional delegation to remedy this deficiency were unavailing. But the delegation was more successful in pushing for some other improvements recommended by the SEO. Most notably, a "savers keepers" amendment has been adopted that should help New York avoid or minimize cuts in its existing entitlement to natural gas even if existing gas users actually reduce their consumption through conservation.

The PSC, the largest of the state energy agencies by far and the only one to predate the Arab oil embargo, has been taking some important new initiatives of its own. In 1975 and early 1976 the PSC conducted exhaustive hearings on the question of whether electricity rates should reflect incremental or "marginal" costs—as, for instance, the cost of new generating capacity which is required to meet the peak loads that occur on hot summer afternoons when air-conditioning units are on full blast. This question is relevant to reducing growth of plant capacity—and hence to curbing the rapid rise in electricity bills, slowing growth in power consumption, and reducing the environmental impacts associated with the construction and operation of additional generating units.

The PSC later issued an opinion concluding that marginal costs do indeed provide a reasonable basis for electric rate structures, although saying it would take a gradual approach to applying the marginal cost principle so as to avoid abrupt changes in rates. In its first order based on this principle, issued in late 1976, the PSC directed the Long Island Lighting Company (LILCO) to establish "time-of-day" rates for its large commercial and industrial customers, with a higher tariff for peak load periods.

This past September the agency went a step further by ordering LILCO to charge time-of-day rates to its large residential customers, too, with a new twist added. In summer, rates will vary not only with the time of day—the higher tariff applying between 10 a.m. and 10 p.m.—but with a rise in the temperature to 83°F or above; at that point the rate would, at least nominally, shoot up from 3.3 cents per kilowatt-hour to 29.3 cents. To cushion the shock and allow time for installation of the necessary meters, the PSC provided that the new rates will not actually go into effect until next fall. Meanwhile, "dummy" bills can be sent out to show LILCO's customers what will be coming. Further, the price increase that

Carey on Energy Planning

In his special energy message to the Legislature on 8 February, Governor Hugh L. Carey called for a state energy planning process "to integrate planning in all energy sectors, and provide a rational framework for energy decision-making in state government and in the private sector."

". . . the Energy Office would prepare a comprehensive forecast and biannual plan" he said. "The [15-year forecast of energy needs] and consequent plan would serve as the basis for administrative and legislative activities, including major energy facility siting and state evaluation and response to federal policy initiatives. . . . This legislation [providing for the plan] would place New York in the forefront of the national trend toward effective state energy planning."

residential customers will actually have to bear by virtue of the new rates has been set at a maximum of 10 percent.

The PSC is also trying to improve and speed up the process by which the state handles applications by the utilities to build new power plants. At present, a body known as the Siting Board, which was created under a 1972 law that expires at the end of 1978, requires the submission of detailed plans and environmental information for an alternative site as well as for its preferred site—and if a nuclear plant is proposed, the alternative facility must be coal-fired. The Siting Board first decides whether the proposed generating capacity is really needed, then whether the applicant's preferred project or the alternative should be approved. The fact that the Siting Board has acted on only one of the half-dozen or so applications filed during its 5½ years of existence has given rise to widespread criticism. Although not suggesting that the Siting Board be abolished, the PSC has proposed that the questions as to power requirements and alternative sites be settled largely through generic proceedings of statewide scope. (The PSC and the SEO are in sharp conflict as to how "determinative" a role the latter should have in assessing power needs.)

For instance, with respect to alternative sites, the PSC already has taken steps to create a "site bank" to which utilities would look in selecting places to build the approximately 15 new steam-electric generating plants that are expected to be needed by the year 2000. The utilities have come up with a preliminary list of nearly 300 sites, and this number will be winnowed down to about 30 on the basis of criteria that probably will not be established until after extensive public hearings.

A fourth major actor in the field of energy policy besides the PSC and the two new energy agencies is the New York Legislature itself. The Home Insulation Act that emerged from the 1977 session is, as one SEO official describes it, "the very law that Congress did not have guts enough to pass." It requires the larger electric and gas utilities to conduct for a nominal fee home "energy audits" upon request and to ensure (as the lender of last resort) that homeowners can obtain, on favorable terms, loans for improvements such as attic and wall insulation and furnace efficiency modifications.

Briefing

World Food—the Next Presidential Commission

There has been talk for some years of the need for a national food and nutrition policy. Now President Carter, in response to a congressional resolution, has agreed to form a presidential Commission on Domestic and International Hunger and Malnutrition.

Congress has been distressed over what it calls the "continuing paradox" of the existence of surplus grain in some countries while 20 percent of the world population is malnourished. It wants to find out what effect American food and foreign aid policies have on the world food and nutrition picture. The commission, to be authorized for 2 years, is intended to spur the development of a national "food, hunger, and nutrition policy" unifying dozens of food-related and aid programs throughout the government. The commission is also supposed to look into the causes of world hunger.

The commission's mandate is more comprehensive than either of the two latest national forays into food policy—the 1969 White House nutrition conference, and the federal study of world food problems prepared for the 1974 World Food Conference in Rome. That study, says the House report, "did not fully consider the relationship between United States domestic food policy and world food problems." The commission is not expected to do any fact-finding or make specific programmatic recommendations; instead it is to bring together the available evidence and make broad policy recommendations.

Creation of the commission is consonant with the Administration's desire to broaden the meaning of its "human rights" concerns to include health, all under the label of "human needs." The White House is currently engaged in a major survey of the government agencies that have anything to do with international health, to see whether all U.S. programs can be organized to make the most of their potential for furthering the Administration's humanitarian foreign policy goals.

Sleeping Pill Study Under Way at IOM

It is said that at some time or other one-third of all Americans suffer from, or at least complain of, insomnia. As a result, some 27 million prescriptions a year are written for hypnotic drugs, many of them barbiturates. But taking a sleeping pill for insomnia is somewhat like kicking the Coke machine to make it work—the cure is crude, temporary, and its relation to the cause is obscure.

Last year, presidential health adviser Peter Bourne, head of the Office of Drug Abuse Policy (ODAP), stirred controversy when he expressed concern about the widespread use of barbiturates at a time when newer, safer hypnotics have become available, and suggested that the country might be better off if barbiturates were banned. Subsequently, ODAP and the National Institute of Drug Abuse (NIDA) contracted with the Institute of Medicine (IOM) for a year-long study of the medical use of barbiturates, a topic that IOM quickly arranged to have expanded to cover all hypnotic drugs.

Three classes of drugs are available for insomnia: barbiturates, bezodiazepines (namely, Dalmane), and "non-barbiturates" including methaqualone, which has enjoyed some notoriety as a drug of abuse. Dalmane, a relatively new product, accounts for 47 percent of all prescriptions; about 20 percent are for barbiturates, whose use has been declining with the increased use of Dalmane.

The overall use of hypnotics has gone down in the past 6 years because of the increased substitution of antidepressants, antipsychotics, and tranquilizers. But, according to a NIDA report, average prescription sizes for hypnotics are high—ranging from 36 to 59 pills apiece—despite the fact that almost all the drugs have been proved efficacious only for short-term administration.

What to do? At a public meeting convened last month by IOM the answer was unanimous: more research. "The lack of data becomes more and more overwhelming," complained IOM committee member William Dement, a Stanford University sleep researcher. "It seems as though we are where abdominal surgery

0036-8075/78/0224-0866$00.50/0

In addition, the Legislature passed several other energy conservation measures, including bills to establish efficiency standards for air conditioners (the sale of inefficient units will be banned) and for hot water heaters. The Legislature also sought to ensure that the R & D work sponsored by NYSERDA will be directly responsive to the state energy plan by providing that this agency shall be headed by the SEO commissioner.

A bill to apply energy efficiency standards to all new building construction was passed, only to be vetoed by Governor Carey because the Senate and the Assembly had retained the right to override administrative revisions to construction codes. This measure, which is much stronger than the law Congress passed in 1976 with respect to building codes, is on the legislative agenda again this year and presumably will be modified to meet the governor's objections.

A number of other energy measures will also be coming up again or for the first time. Some of the priority items, as determined by the staff of the Legislative Commission on Energy Systems, are bills on solar zoning and solar access rights; district heating (with incentives for utilities that provide this service in which condenser cooling water from power plants would be used for space heating in homes and commercial buildings); and "truth in heating." As for the latter, anyone selling a new or used building would have to produce past fuel bills or other information about the building's heating requirements for the prospective buyer.

Some other proposals that may come up on this year's legislative agenda call for mandatory automobile engine tune-ups, increased generation of hydropower (perhaps with incentives for development of small-dam or "low head" hydro units), and policies to deal with potential conflicts between utilities and private companies and individuals who produce electricity by "soft technologies" such as solar, wind, and low-head hydro.

Although New York is clearly making headway in developing a substantial, many-faceted state energy program, it is uncertain whether the still unseen state energy plan will have a truly binding or determinative effect on the policies of the PSC and all other state agencies. If this does not come to pass, and it may not, the SEO—which, with a budget of

Briefing

was 1000 years ago—treating symptoms instead of disease entities." The problem, as Ismet Karacan of Baylor College of Medicine sees it, is that we are treating a complex of disorders of unknown etiology with drugs whose action, particularly over the long term, is also unknown.

The picture is complicated by dissension in the world of sleep research. There are basically two camps. One, represented by researcher Dement, emphasizes that the sleeping physiology is totally different from the waking physiology. Several physiological causes of insomnia have been identified—sleep apnea (cessation of breathing), nocturnal myoclonus (leg twitching), and disruption of body rhythms—but Dement believes that further research will reveal that other processes occurring only in sleep cause a substantial proportion of now-mysterious cases of insomnia. Dement also claims to find no convincing evidence that psychological problems are a significant cause of insomnia.

In total opposition to this view stands Anthony Kales, a psychiatrist apparently very much in the minority, who does sleep research at Hershey Medical Center in Pennsylvania. Kales contends that the vast majority of cases of insomnia are "secondary to psychologic disturbances," and (according to an assistant), "there is no such thing as primary insomnia of unknown etiology." Kales has encountered far fewer cases of apnea and myoclonus than has Dement (who says the two disorders account for 20 percent of insomniacs' troubles) and says that many people with those disorders have no problem sleeping.

At present, all the sleep researchers agree that hypnotics are overprescribed and more needs to be known about comparative psychological and physiological effects. But sleep research itself is still in its infancy, and it will probably be a long time before clinicians are in broad agreement on whether sleep disorders are a complex of problems unto themselves, or whether the chronic insomniac should be packed off to a psychiatrist. For now, IOM has taken no stand on further restrictions on barbiturates.

House Population Committee on the Move

The newly formed House Select Committee on Population held 3 days of hearings in early February, the first of five sets of hearings planned through May.

The committee was created last December, largely through the efforts of Representative James Scheuer (D–N.Y.), who is now its chairman. Both Scheuer and ranking minority member John N. Erlenborn (R–Ill.) served on the Commission for Population Growth and the American Future, which issued its report in 1972.

The new committee will include international as well as domestic issues in its deliberations; the differing demographic patterns of the developed and developing world will be examined, and U.S. aid policies will be scrutinized to see how they affect world population trends.

The committee has a sizable staff—37, counting volunteers—and is headed by Ford Foundation demographer Michael Teitelbaum, who has just returned from teaching at Oxford University.

At the first set of hearings, witnesses hashed over the old issue of the extent to which population reduction is possible without, or dependent upon, development. The most pessimistic witness was sociologist Kingsley Davis of the University of Southern California, who said we have had "little or no success" in population reduction because we continue to fail to build family planning incentives into all development programs. But George J. Stolnitz, population and development officer at the United Nations, sounded optimistic, pointing to advances in education, women's rights, and lowered mortality rates, all of which are correlated with a lowered birthrate.

The matter of abortion was raised but promptly nipped in the bud by Scheuer, who said "we ought to concentrate on what's easily doable with a minimum of controversy." The topic may be difficult to avoid, though, when the committee gets around to discussing pregnancy among American teenagers.

The next four hearings will address fertility and contraception in America, immigration and migration, population and development, and consequences of the changing size and structure of the U.S. population.

Constance Holden

$4.5 million in fiscal 1978 and a professional staff of 42, is no bureaucratic heavyweight—will probably turn out to be not much more than the administering agency for federally supported conservation programs and for emergency fuel allocations.

Commissioner Larocca has going for him the fact that he is close to Governor Carey and that both Carey and the chairmen of the Senate and the Assembly corporation committees, Senator James T. McFarland (R-Buffalo) and Assemblyman Irwin J. Landes (D-Long Island), are committed to the idea that there must be a comprehensive state energy plan, just as there are such plans for health services and higher education. Nevertheless, Larocca and the governor could have trouble convincing the Legislature that any one agency should have the authority to make plans binding on all agencies with respect both to the question of how much electric power will be needed 10 or 15 years hence and how it shall be generated. The PSC and its acting chairman, Charles A. Zielinski, do not want the energy plan to be this far-reaching.

But Larocca has doggedly insisted, contrary to everything Zielinski and the PSC staff have been saying, that adversary proceedings of the kind conducted by the PSC and the Siting Board do not offer the best way of deciding policy issues such as how much New York should rely on electricity in comparison to other forms of energy or whether more nuclear power plants should be built until the problem of radioactive waste management is resolved. He points out that the latter question was a central issue in the Siting Board's recent 3-to-2 decision to approve construction of a nuclear plant on Lake Ontario.

In an effort to have the forthcoming energy plan carry more legal and political weight, Larocca is now proposing that its formal adoption as a state-approved plan be by the SEO advisory council, which includes members of the cabinet, among them Zielinski. But inasmuch as Larocca is himself the council's chairman, the question arises whether the council could review the plan objectively.

Even if Larocca prevails and produces a plan that represents official state policy that no agency can ignore, it is not clear how much will come of it. The high cost of energy is a matter of such concern in New York that the public might not put up with an increase in utility bills occasioned by new policies such as marginal cost pricing or innovative projects such as district heating. If so, Larocca and his associates could find themselves in the paradoxical predicament of being severely constrained by the very problem—sharply rising energy costs—they are trying to help overcome.

Federal Constraints

Also, there is a question of how well the SEO will be able to cope with the constraints or inhibitions imposed by the federal government. Already SEO staffers complain that none of the federal money received for conservation programs can be spent for energy "conversion"—for instance, for a project to convert an oil-burning industrial or utility boiler to wood chips, a fuel abundant in the forested regions upstate. An inhibition of this kind can be overcome if the state is willing to appropriate money of its own for such endeavors.

But there could be other federal constraints which, whether justified or not, could not be circumvented. If the SEO, NYSERDA, and some of the downstate utilities such as Consolidated Edison or Long Island Lighting Company should undertake to use municipal refuse as a boiler fuel, would this prove feasible in light of the federal Clean Air Act? Perhaps so, but at this point one simply cannot know for sure.

Yet, despite all such uncertainties, the effort here to proceed ambitiously in the development of a comprehensive energy policy for New York could renourish some of the hopes disappointed by the lack of such a policy nationally. It is a hopeful sign that the federal system—which, in theory at least, makes for 50 potential centers of governmental initiative and innovation—will serve the nation well in its efforts to come effectively to grips with the reality that the old era of energy abundance has come to a close.

—LUTHER J. CARTER

Many Gave at the Office in 1976

A recently released study of donations to candidates in the 1976 federal elections illustrated some well-known facts about corporate largesse: Republicans had only a slight edge in receipts, with most corporations giving to members of both parties; incumbents found it vastly more easy to attract funds than challengers, by a ratio of 4 to 1; and much of a corporation's total spending was spread among members of the committees that write legislation affecting the giver.

The most important news in the study, which was done by the staff at Common Cause, the public interest lobby, was that 1976 marked the first time corporations really took advantage of the 7-year-old law that permits them to set up campaign committees for employee donations. "Some 400 corporations established political committees for the first time during 1975 and 1976," and the overall contributions by the committees rose almost 300 percent in 1976 to $7.1 million, the study said.

In terms of the broad range of issues expected to be taken up by Congress this year, the most important numbers in the study are those that reflect 1976 industry investments in current members of the House and Senate. Among industries involving high technology, trade associations in the health area (such as the American Medical Association and the American Dental Association) were far and away the most beneficent ($1.7 million). Thirty current members of the Senate received an average of $8071 each from health associations, for example, and 387 members of the House received an average of $3804 each. Other corporate investments in current congressional members are reflected in the chart below.

—R. JEFFREY SMITH

Industry	House		Senate		Total ($)
	Members (No.)	Average ($)	Members (No.)	Average ($)	
Coal, oil, and natural gas	285	1145	33	3396	438,611
Chemicals and metals	236	693	24	2527	224,439
Aerospace	198	693	21	1857	176,332
Communications	211	495	21	1025	126,152
Electronics	218	365	23	1667	116,260
Pharmaceuticals	118	284	19	995	52,500

0036-8075/78/0224-0868$00.50/0