Land Use: Congress Taking Up Conflict over Power Plants

During the 1960's problems of environmental pollution emerged as a major national issue, and it now seems evident that in the 1970's this issue will be broadened to include the politically sensitive question of land-use planning and controls. The fact that the United States lacks a coherent land-use policy is highlighted by the persistent controversy over the selection of sites for new facilities for the generation and transmission of electricity. Efforts to overcome the threat of energy shortages are running head on into opposition from people afraid that the new power plants and transmission lines being proposed will put a blight on the environment. Several current legislative initiatives that represent steps toward a national land-use policy are being taken either wholly or partly in response to this "crunch" over the siting of power facilities.

Next year, the Nixon Administration will propose legislation on the location and certification of power plants. In Congress, Senator Edmund S. Muskie (D–Maine) is also developing power-plant siting legislation, and Senator Henry M. Jackson (D–Wash.), another key legislator on environmental matters, already has won approval of the Senate Interior Committee for the initial draft of a bill to require the states to make a major commitment to land-use planning and regulation generally.

Industry Opposition

The private utility industry, taken as a whole, has indicated plainly that it will oppose any proposals to give the federal government a major say in the siting and certification of power facilities. In fact, some observers, aware of the frustrations of those congressmen who have long and unsuccessfully promoted efforts to tighten the regulatory hold of the state and federal governments over the utilities, doubt that any meaningful legislation will be enacted.

Nevertheless, given the present concern in Congress about potential shortages of power and about environmental quality, the prospects for legislative action may be brighter than heretofore. Even some legislators who usually have taken a laissez-faire attitude toward the utilities appear to feel that Congress must do something to help resolve the conflict between the siting of power plants and protection of the environment.

According to the Federal Power Commission, 20 years from now the United States will be producing three times the amount of power that it is producing today. Some 300 additional sites for nuclear and fossil-fuel thermal plants of 500 megawatts or larger will be needed, the majority of the plants to be huge facilities in the 1000- to 4000-megawatt range. A 3000-megawatt thermal plant requires a site of from 400 to 1200 acres, the size depending upon whether the plant is a nuclear plant or a fossil-fuel facility requiring extensive coal and ash storage areas.

Moreover, while overhead electric transmission-line rights-of-way already cover nearly 4 million acres and extend for several hundreds of thousands of miles, 20 years hence—barring a breakthrough in underground transmission technology—the nation's countryside will be laced with great new swaths of overhead transmission rights-of-way. For instance, whereas today there are 67,000 miles of extrahigh-voltage lines, by 1990 there will be some 165,000 miles of such lines, to say nothing of the many thousands of additional miles of lower voltage lines that will have been built.

Many of the new thermal plants will be built along seacoasts, estuaries, and large lakes and rivers and will draw on these bodies of water for purposes of condenser cooling. In other cases rivers will be dammed to form large reservoirs to provide cooling water and thousands of acres of bottomland will be inundated. For part of their peaking power, utilities will look to pumped storage hydropower units and these too will have a major esthetic and ecological impact. Such facilities have an upper reservoir—which may be built on top of a scenic mountain or palisade, such as Storm King on the Hudson—which releases water to generate power during hours of peak demand and which is then refilled during off-peak hours by pumping water up from the river or reservoir below.

And, even if the best available pollution-abatement technology is used in the new thermal plants, damage from air and thermal pollution can result if plant sites are not chosen with full knowledge of meteorological patterns and the assimilative capacity of the body of water into which cooling water is discharged. In sum, the big push on the part of the electric utility industry to meet projected power needs will alter, if not degrade, a significant part of the American landscape.

"Piecemeal" Regulation

As noted in the recent report *Electric Power and the Environment** sponsored by the White House Office of Science and Technology (OST), "preconstruction reviews of the expansion plans of [utilities] are generally piecemeal, uncoordinated, and incomplete," although a few states such as New York, California, and Maryland are now trying to improve on their past procedures. The situation is no better at the federal level, and, while a federal license is required for nuclear and hydropower plants, none is required for fossil-fuel plants, which produce most of the power.

The legislation that President Nixon will send to Congress will be based on these major recommendations of the OST report: (i) utility expansions should be planned at least 10 years ahead of construction and the plans should be made public at least 5 years before construction; (ii) a state or regional agency should be designated to review and approve plans for large new power facilities—with the federal government to step in and perform this role if a state fails to act; (iii) an expanded program of research and development, to be financed largely from utility rates, should be undertaken to achieve such objectives as better pollution controls, economical long-distance underground transmission, and perfection of such advanced concepts as the siting of power plants on offshore islands or in large "energy centers" or parks.

The utility industry accepts the view that it should put more money into research. And, through its recently estab-

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lished regional "reliability councils," the industry is now making a better effort at long-term planning of new generating and transmission facilities. But shortly before the OST report appeared, the Edison Electric Institute (EEI), which is the most important of the industry trade associations, stated that no need for federal legislation with respect to siting procedures was evident. Further, the EEI held that each utility should be free to decide whether to follow any new certification procedure provided.

Moreover, in commenting on the OST report, an industry spokesman later told *Science* that many power companies would strongly object to a requirement for public disclosure of plans 5 years ahead of construction. The effect of such disclosure, he said, would be to encourage land speculation and jack up the cost of sites not yet purchased and also the cost of transmission rights-of-way. Authors of the OST report had felt that if higher land costs resulted from advance disclosure this would by no means offset the advantage of allowing plenty of time for the public and the environmental protection agencies to evaluate the utility's plans.

Con Ed Needs Help

Not all utilities oppose congressional action with respect to the siting of facilities. For instance, in a hearing last August, Charles F. Luce, former Under Secretary of the Interior and now chairman of the board of Consolidated Edison of New York, told Senator Muskie's Subcommittee on Intergovernmental Relations that "if this committee can show the way and find solutions, we will all be thankful."

Con Ed's plans to increase its generating capacity have encountered increasing public opposition. Luce said that what is needed is a certification procedure in which a utility would have to go to only one agency. That agency would give the utility a conclusive yes or no answer as to whether its plans meet all zoning and environmental protection standards. At present, utilities must obtain approvals from a multiplicity of agencies and local governments.

Senator Muskie's bill on the siting of power facilities, which is still under study by his committee, would have licenses for new bulk power facilities issued by a federal agency, not by a state or regional agency as contemplated in the OST report. Federal certification would be a final step in a procedure carried out largely by regional boards appointed by the state governors and made up of persons in no way connected with electric utilities. These boards, which would establish advisory councils to encourage participation by interested citizens in the analysis of plant-siting questions, would decide whether plans for proposed facilities meet appropriate siting criteria. But utilities have great political clout, and, in Muskie's view, final action on siting plans should come at the Washington level and not be left to state or regional agencies that might be too weak to reject plans posing environmental hazards.

Air and water quality standards are, of course, based on such criteria as the maximum water temperatures compatible with fish life and the threshold levels at which air pollutants such as sulfur dioxide become a health threat. The standards concept is central to the antipollution legislation enacted under Muskie's leadership since 1964. If exacting air and water quality standards are to be met, the sites for large new industrial facilities such as power plants *must* be chosen with a view to the assimilative capacity of the airshed or watercourse into which cooling water or treated wastes are to be discharged. Pollution-control technology alone may never be good enough to protect the environment.

The bill by Senator Jackson, which recently received the Senate Interior Committee's unanimous approval, would establish a national land-use policy under which the siting of power facilities would be considered along with other activities of significant environmental impact. Terms of the bill are still tentative, but, in general, this measure would require that the states establish an agency for the planning and control of land use and submit a state land-use plan to a new cabinet-level Land and Water Resources Planning Council.

Projects having a major environmental impact, such as those involving the construction of highways, dams, and airports, would be denied federal funds if the new state agency were not set up and the land-use plan submitted to Washington within 5 years. The state plans would be prepared in consultation with federal agencies, but, as the bill is now drafted, federal approval of the plans would not be a prerequisite for funding of construction projects. Even so, given the traditional abhorrence with which many politicians have viewed large-scale public planning, the Interior Committee's adoption of the Jackson bill is remarkable. Senator Jackson, the chairman, is a liberal on most domestic issues, but the Republicans on the committee include some senators who are highly conservative.

Testifying on the Jackson bill, Harry G. Woodbury, a senior vice president of Con Ed of New York and a former chief of civil works for the Army Corps of Engineers, indicated general approval of the measure. But while Con Ed clearly is an exception within the industry in this regard, it is not the only utility now willing to have the public better represented in the consideration of plant-siting questions. Another is Northeast Utilities, a holding company for several utilities in southern New England.

Northeast has given $180,000 to the Fund for the Preservation of Wildlife and Natural Areas, a group said to be Boston Brahmin in tone, to support a citizens' evaluation of two possible pumped storage projects in the Berkshires. Quite understandably, Lelan F. Sillin, Jr., president of Northeast, has expressed indignation at the fact that some conservationists have questioned the good faith of this company initiative.

Dummy Corporation

However, by having generally failed to take the public into its confidence in the past, the utility industry is itself to blame for the skepticism with which it is now viewed. In some cases utilities have practiced outright duplicity. A prime example of this came to light recently in hearings conducted by Representative Henry S. Reuss (D–Wis.). Reuss discovered that, in 1963, Potomac Electric Power Company (PEPCO) used a dummy corporation—dubbed Idamont, Inc.—to purchase a site bordering a part of the Potomac estuary now considered important as fish and wildilfe habitat and as having prime recreational value. Not until this past spring and summer did PEPCO reveal its ownership of the property and announce that it was considering building a 2535-megawatt complex of generating facilities on the site. The likely result of such sleight of hand is to bring nearer the day of comprehensive land-use planning and controls by public agencies.—LUTHER J. CARTER